THE UNEXPLAINED FILE

CULT & OCCULT

Introduction by Francis King

CULT & OCCULT

Can we see into the future, classify personalities by the stars or discover water in the ground using a bent twig? This volume describes the systems man has developed and depended on to give him power over his fate. Its chapters include:

A Guide to Dowsing – searching for the earth's secrets

Symbols in the Sky – the study of astrology and the zodiac

Knowledge by Numbers – finding wisdom through numerology

Divination – how to foresee the future using palmistry, Tarot cards, I Ching and geomancy

Occult Design – the power of proportion

Ritual and Magic – sex cults, voodoo and the strange beliefs of Nazi leaders

The Alchemist's Art – turning base metals into gold

Witchcraft – white witches, black arts and Aleister Crowley, the 'Beast'

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Introduction

This book is concerned with the theories and practical techniques that are generally lumped together as 'the occult' and, more particularly, with some of the cults whose devotees accept those theories and employ those techniques.

In a sense it is a paradox that any openly published work should claim to deal with 'the occult', for the phrase literally means 'that which is secret', or 'that which is hidden'. But the times when the nature of occult theory and practice was hidden from the multitude are long past. Today it is easy to buy books, some of them of a 'do-it-yourself' variety, which give details of almost all the occult arts, from ceremonial magic to alchemy.

There are two senses, however, in which the occult is still 'that which is hidden'.

Firstly, there are many occult societies and cults whose membership, meeting places, and innermost activities are kept secret from the world. Secondly, and perhaps more importantly, all aspects of occultism are concerned with the hidden recesses of the human mind, the deepest and most secret aspects of the unconscious, the levels of 'inner space' where the individual human being comes into contact with what the ancient magicians and occultists called the *Anima Mundi*, 'the soul of the world'.

The *Anima Mundi* is conceived of as being like a vast underground reservoir, not of water, but of memory. All humanity's past experiences, thoughts, dreams and hopes are contained in this reservoir, the contents of which are constantly being increased by contemporary experience. The *Anima Mundi*, then, is mankind's treasure chest of emotion, thought and spiritual striving; a treasure chest that, as the centuries and millennia have elapsed, has been enriched by the images and thoughts of living men. It is possible, so it is held, to come into contact with the contents of the treasure chest, either accidentally or deliberately. For all artists, all poets, all who give free rein to the imagination, are brought, independently of their own wishes, into a state of mind in which images flood up into consciousness from the *Anima Mundi*. It is also possible for the individual to establish contact with the *Anima Mundi* deliberately by the use of occult techniques based on the use of ritual, meditation and symbol. The poet W.B. Yeats, who was a devotee of the magical arts, was adept at the use of these techniques. He recorded, for example, that by thinking of a symbol traditionally associated with mankind's long-lost age of primal innocence he was able to induce a visionary experience in another man. The latter found himself in 'a walled garden on the top of a high mountain, and in the middle of it a tree with great birds in the branches, and fruit out of which, if you held a fruit to your ear, came the sound of fighting'.

The concept of the collective unconscious, formulated early in the present century by the psychologist C. G. Jung, bears a marked resemblance to traditional teachings concerning the *Anima Mundi*. The human mind, Jung asserted, has been shaped and affected by hundreds of thousands of years of human experience. The concentrated essence of this experience is buried deep in the minds of each of us. Below the conscious mind, said Jung, is the personal unconscious, the accumulated experience and memory of the individual; and below that lies the collective unconscious, shared by all humanity and in no way individualised. The 'archetypes', the primitive and powerful images of the collective unconscious, find expression in dream and vision, in myth and symbol, in poetry and religion.

Whether one chooses to call this 'well' of living images the collective unconscious or the *Anima Mundi* is of no great importance. The point is that the concept is a significant one in relation to the whole field of the occult, establishing a connection between such seemingly unconnected occult techniques as dowsing and ritual magic, divination by geomancy and alchemy.

Take, for example, divination – at its lowest level 'fortune telling', at its highest the diagnosis of the spiritual condition of the individual human soul. Five methods of divination are examined in this book: geomancy, the *I Ching*, palmistry, astrology, and the use of the Tarot – the 'wicked pack of cards', as T. S. Eliot described it in his poem *The Waste Land*. The first two are concerned with abstract arrangements of dots and lines, the last two with a rich and varied pictorial imagery, and palmistry with the lines on the human hand. In all, then, the five divinatory methods described can be divided into three strongly differentiated categories. Yet, interpreted in relationship to the hypothesis of the *Anima Mundi*, all three categories can be seen to be no more than manifestations of one underlying reality, the ability of diviners to descend into the utmost depths of their own minds and thus to unlock the treasure chest of images – the *Anima Mundi*, the collective unconscious of mankind.

For, on this hypothesis, the symbols of astrology, the pictures of the Tarot, the 'crosses', 'stars' and other significant marks examined by the palmist, the 64 hexagrams of the *I Ching*, and the 16 dot-arrangements of geomancy, are all outward representations of things that are present in the minds of each and every one of us, the archetypes of the *Anima Mundi*. The astrologers who examine the permutations of the symbols in the horoscope of an individual, the cartomancers who 'tell a fortune' from the pattern of a Tarot 'spread', the palmists who achieve a certain dissociation of consciousness by staring into the hands of their clients, and the diviners who manipulate either geomantic dots or the yarrow stalks of the *I Ching*, are all, in the final analysis, making their diagnoses and prognoses in precisely the same way – they are calling on the spiritual wisdom of thousands of years of human experience.

There have been, and still are, other explanations of the divinatory process than that provided by the application of the concept of the *Anima Mundi*. Thus, for example, there have been those who have argued that when a diviner shuffles a pack of Tarot cards, lays some of them on a table, and 'tells a fortune', his or her activities are literally controlled by a supernatural being called 'the Angel of the

One of Maj. Gen. J.F.C. Fuller's designs for a planned temple to house one of Aleister Crowley's occult societies. Rich in symbolic detail, the design as a whole represents macroprosopus – 'the vast countenance' – the highest aspect of the Godhead. It also correlates with the mystical symbol known as the Tree of Life

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Tarot'. Similarly, it has been asserted that gnomes – elemental spirits associated with the densest aspects of physical matter – are the psychic force controlling the dot-patterns of geomancy.

Even if such strange claims are true, they in no way exclude the existence of the *Anima Mundi*. If mankind has encountered supernatural beings during its long evolutionary climb, the experience of such encounters has been incorporated into the *Anima Mundi*. If, on the other hand, gnomes, angels, and spirits of good and evil, are creations of human imagination, they still represent what C. G. Jung called 'psychic truths' powerful psychological archetypes – and are component parts of the *Anima Mundi*.

The theory that all forms of divination are best understood in terms of the existence of the collective unconscious is supported by the fact that the symbols used in all forms of divination – the Tarot cards and the hexagrams of the *I Ching*, for example – can be used as 'astral doorways' through which it is possible for the individual experimenter to pass into the mysterious realms of the *Anima Mundi*.

The way in which this is done is comparatively simple. The experimenter uses some symbol – pictorial, geometric, even a palm print – to achieve a partial dissociation of consciousness. Take, for example, the use of the rich imagery of the Tarot trumps for this purpose in the following extract from an instructional manuscript of an occult society that flourished in the last century:

> Secure for an hour or longer absolute freedom from interruption. Then alone, or with one or two others . . . enter . . . a private chamber. Remain in silence and contemplation for several minutes. . . . Then proceed to contemplation of . . . a Tarot Trump: either by placing it before you and gazing at it, until you seem to see *into* it; or by placing it against your forehead . . . in this case you should have given previous study to the card, as to its symbolism, colouring, analogies etcetera.
>
> In either case you should then sink into contemplation upon the abstract idea of the card; being in entire indifference to your surroundings. If the mind wanders to anything disconnected from the card a beginner will not succeed in 'seeing' anything with the spiritual vision.
>
> Consider the symbolism of the Tarot card, and all that it implies . . .
>
> The vision may begin by the concentration upon the card changing into a state of reverie; or with a distinct sense of physical and mental change; something allied in sensation to a faint or loss of consciousness with an inner feeling that one should resist this. But do not fear, do not resist, let yourself go; and then the vision should take place.
>
> Should something disturb you, the vision will cease, and you will return to normal consciousness, as though from a doze. Otherwise the vision will end of itself, when the time is right. . . .

Some of those who have used the Tarot cards (and other symbols) in the way described above have left written accounts of their experiences. It is clear from these accounts that the quality of the supposed 'spirit visions' steadily improves with each successive experiment. At first the seeker of visions finds the experience disappointing, feeling that he is daydreaming, wasting his time in futile imaginings. After a time, however, it is as if he were watching a cinema film in his mind's eye. Eventually the 'daydream', the 'cinema film', assumes total clarity. The experimenter actually participates in the vision, hearing, seeing, and taking part in events which, psychologically speaking, are *more* real than those of everyday life.

It is possible to consider the 'super-reality' which is thus encountered as either a descent, via the unconscious, into the *Anima Mundi*, or as an objective experience of supernormal modes of existence. It must be remembered, however, that the two possibilities are not mutually exclusive – the archetypes of the collective unconscious may well be projections of subtle forces or beings which enjoy an objective existence independently of the minds of men.

The *Anima Mundi* not only provides a rationale for all modes of divination, it links those same modes with all the other subjects covered in this book, even those which, at first sight, seem utterly distinct from it – the association of parts of Nazi ideology with the occult, for example.

How, it may be asked, can *Anima Mundi*, the treasure chest of human wisdom, be connected with anything so loathsome as the beliefs of such men as Himmler, Hitler and Rosenberg?

The answer is quite simple. The collective unconscious includes the totality of human experience, good *and* evil; in other words, the *Anima Mundi* is a rubbish heap as well as a gold mine; it contains not only beauty, wisdom and knowledge – but destruction, hatred, and ignorance. The Nazi revolution was, on a psychic level, an upwelling of the ancient and sinister archetypes of the most destructive aspects of Teutonic mythology into consciousness – the release into the 20th century of the primitive rage of the berserk Viking. As is argued in the section of this book dealing with ritual magic, there is some reason to believe that these archetypes were deliberately evoked from the *Anima Mundi* by those responsible for organising the outward forms of such Nazi rallies as those that took place at Nuremburg. Those rallies were, in a sense, magical ceremonies. For ceremonial magic is no more than a way of breaking down the barriers between everyday consciousness and the *Anima Mundi*.

All the cults described in this book – Tantrism, witchcraft, voodoo, the societies founded by Aleister Crowley – have been, and still are, engaged in just such a breaking down of the barriers between the personal consciousness and the collective unconscious, between the soul of the individual and the *Anima Mundi*, 'the soul of the world'. Thus, for example, devotees of both Tantrism and witchcraft are engaged in the process of bringing the archetype of the Great Mother, the creative force of the universe, into their own lives and the life of the world of which they form a part. Similarly the alchemist is endeavouring to practise, not some crude chemical process, but the art of entering the *Anima Mundi* and, by exerting his or her influence upon this hidden world, changing the world of matter which is its outward manifestation; the laboratory work of the alchemist is no more than an outward reflection of interior, psychic processes.

Approached as things in themselves, each of them separate from one another, the subjects dealt with in this book seem no more than a collection of strange beliefs and practices. Viewed as specific modes of achieving the same end – making available the riches of the *Anima Mundi* to the individual soul – all these subjects are one: the Occult.

Francis King

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A guide to dowsing

Can a rod, a forked stick or a pendulum reveal what lies beneath the surface of the earth? The ancient skill of dowsing is traditionally used to discover water, but today's practitioners can also locate breaks in pipes or predict failures in power cables.

A seeker after truth

Tom Lethbridge is now accepted as a major figure in the world of the paranormal, but he took many years of painstaking academic and practical research to reach his important conclusions

NO ONE WHO IS interested in the paranormal can afford to ignore Tom Lethbridge, yet when he died in a nursing home in Devon in 1971, his name was hardly known to the general public. Today, many of his admirers believe that he is the single most important name in the history of psychical research. His ideas on dowsing, life after death, ghosts, poltergeists, magic, second-sight, precognition, the nature of time, cover a wider field than those of any other psychical researcher. Moreover, they fit together into the most exciting and comprehensive theory of the 'occult' ever advanced.

These ideas were expressed in a series of small books published in the last 10 years of his life. The odd thing is that Lethbridge took no interest in psychic matters until he retired to Devon in his mid fifties. He was trained as an archaeologist and a historian, and spent most of his adult life in Cambridge as the Keeper of Anglo-Saxon Antiquities at the University Museum. But even in that respectable setting he was a maverick, and in 1957 he left Cambridge in disgust at the hostile reception of one of his books on archaeology. Together with his wife Mina, he moved into Hole House, an old Tudor mansion on the south coast of Devon. He meant to spend his retirement reading and digging for bits of broken pottery. In fact, the most amazing period of his eventful life was about to begin.

Above: Tom and Mina Lethbridge were keen – and accomplished – dowsers

Below: Ladram Bay, Devon, where people felt a strong urge to jump off the cliffs

The person who was most responsible for this change of direction was an old 'witch' who lived next door. This white haired little old lady assured Lethbridge that she could put mild spells on people who annoyed her, and that she was able to leave her body at night and wander around the district – an ability known as 'astral projection'. Lethbridge was naturally sceptical – until something convinced him.

The witch explained to him one day how she managed to put off unwanted visitors. What she did was to draw a five pointed star – a pentagram – in her head, and then visualise it across the path of the unwanted visitor – for example, on the front gate.

Shortly afterwards, Tom was lying in bed, idly drawing pentagrams in his head, and imagining them around their beds. In the middle of the night, Mina woke up with a creepy feeling that there was somebody else in the room. At the foot of the bed, she could see a faint glow of light, which slowly faded

as she watched it. The next day, the witch came to see them. When she told them that she had 'visited' their bedroom on the previous night, and found the beds surrounded by triangles of fire, Tom's scepticism began to evaporate. Mina politely requested the old witch to stay out of their bedroom at night.

Three years later, the old lady died in peculiar circumstances. She was quarrelling with a neighbouring farmer, and told Lethbridge that she intended to put a spell on the man's cattle. By this time, Lethbridge knew enough about the 'occult' to take her seriously, and he warned her about the dangers of black magic – how it could rebound on to the witch. But the old lady ignored his advice. One morning, she was found dead in her bed in circumstances that made the police suspect murder. And the cattle of two nearby farms suddenly got foot and mouth disease. However, the farmer she wanted to 'ill wish' remained unaffected. Lethbridge was convinced that the spell had gone wrong and 'bounced back'.

The invisible world

But the old lady's death resulted – indirectly – in one of his most important insights. Passing the witch's cottage, he experienced a 'nasty feeling', a suffocating sense of depression. With a scientist's curiosity, he walked around the cottage, and noticed an interesting thing. He could step *into* the depression and then out of it again, just as if it were some kind of invisible wall.

The depression reminded Lethbridge of something that had happened when he was a teenager. He and his mother had gone for a walk in the Great Wood near Wokingham. It was a lovely morning; yet quite suddenly, both of them experienced 'a horrible feeling of gloom and depression, which crept upon us like a blanket of fog over the surface of the sea'. They hurried away, agreeing that it was something terrible and inexplicable. A few days later, the corpse of a suicide was found a few yards from the spot where they had been standing, hidden by some bushes.

About a year after the death of the witch, another strange experience gave Tom the clue he was looking for. On a damp January afternoon, he and Mina drove down to Ladram Bay to collect seaweed for her garden. As Lethbridge stepped on to the beach, he once again experienced the feeling of gloom and fear, like a blanket of fog descending upon him. Mina wandered off along the beach while Tom filled the sacks with seaweed. Suddenly she came hurrying back, saying: 'Let's go. I can't stand this place a minute longer. There's something frightful here.'

The next day, they mentioned what had happened to Mina's brother. He said he also had experienced the same kind of thing in a field near Avebury, in Wiltshire. The word 'field' made something connect in Tom's brain – he remembered that field telephones often short-circuit in warm, muggy weather. 'What was the weather like?' he asked. 'Warm and damp,' said the brother.

Above: Hole Mill and Hole House in Devon. Hole Mill was the home of Lethbridge's neighbour, a 'witch' or 'wise woman' whose strange powers convinced Lethbridge that the world of the paranormal was worth investigating. Hole House became the Lethbridges' home after Tom left Cambridge in disgust at the reception of one of his books. Here he was to develop his theories on psychic phenomena until his death in 1971

An idea was taking shape. *Water . . .* could that be the key? It had been warm and damp in the Great Wood. It had been warm and damp on Ladram beach. The following weekend, they set out for Ladram Bay a second time. Again, as they stepped on to the beach, both walked into the same bank of depression – or 'ghoul' as Lethbridge called it. Mina led Tom to the far end of the beach, to the place she had been sitting when she had been overwhelmed by the strange feeling. Here it was so strong that it made them feel giddy – Lethbridge described it as the feeling you get when you have a high temperature and are full of drugs. On either side of them were two small streams.

Mina wandered off to look at the scenery from the top of the cliff. Suddenly, she walked into the depression again. Moreover, she had an odd feeling, as if someone – or something – was urging her to jump over. She went and fetched Tom, who agreed that the spot was just as sinister as the place down on the seashore below.

Now he needed only one more piece of the jigsaw puzzle, and he found it – but only years later. Nine years after the first known experiences of depression were felt on those cliffs a man did commit suicide there. Lethbridge wondered whether the 'ghoul' was a feeling so intense that it had become timeless and imprinted itself on the area, casting its baleful shadow on those who stood there.

Whether from the past or from the future the feelings of despair were 'recorded' on the surroundings – but how?

The key, Lethbridge believed, was water. As an archaeologist, he had always been mildly interested in dowsing and water-divining. The dowser walks along with a forked hazel twig held in his hands, and when he stands above running water, the muscles in his hands and arms convulse and the twig

bends either up or down. How does it work? Professor Y. Rocard of the Sorbonne discovered that underground water produces changes in the Earth's magnetic field, and this is what the dowser's muscles respond to. The water does this because it has a field of its own, which interacts with the earth's field.

Significantly, magnetic fields are the means by which sound is recorded on tape covered with iron oxide. Suppose the magnetic field of running water can also record strong emotions – which, after all, are basically electrical activities in the human brain and body? Such fields could well be strongest in damp and muggy weather.

Magnetic emotions

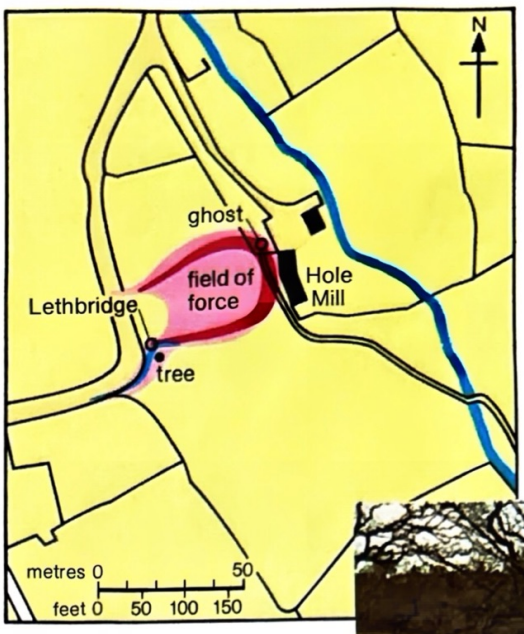
This would also explain why the banks of depression seem to form a kind of invisible wall. Anyone who has ever tried bringing a magnet closer and closer to an iron nail will know that the nail is suddenly 'seized' by the magnet as it enters the force field. Presumably the magnetic field of water has the same property. And if it can 'tape record' powerful emotions, then you would feel them quite suddenly, as you stepped into the field. Both Tom and Mina noticed that the ghoul on Ladram beach came to an end quite abruptly.

And what about 'ghosts' – that is, things actually seen, rather than just sensed? Here again, Lethbridge was convinced that his electrical theory fitted the facts. In 1922 – when he was an undergraduate at Cambridge – he had seen a ghost in the rooms of a friend. He was just about to leave, late at night, when the door opened and a man wearing a top hat came in. Assuming he was a college porter who had come to give his friend a message, Lethbridge said goodnight, and went out. The man did not reply. The next morning, Lethbridge saw his friend, and asked casually about the identity of the man in the top hat. His friend flatly denied that anyone had come in. And when Lethbridge brooded on it, he realised that the man had not worn a porter's uniform. He wore hunting kit. Then why had he not recognised the red coat? Because it wasn't red; it was grey – a dull grey, like a black and white *photograph*. Lethbridge realised that he had seen a ghost. Moreover, his friend's rooms overlooked the river, so there was a damp atmosphere.

Tom had seen a ghost in the witch's garden, in the year before she died. He had been sitting on the hillside, looking down at the witch's house, when he noticed two women in the yard. One was the witch; the other was a tall old lady dressed in rather old-fashioned grey clothes. Later, he saw the witch and asked her about her visitor. The witch looked puzzled; then, when Lethbridge described the figure, said, 'Ah, you've seen my ghost.'

This happened in 1959, before Lethbridge had his important insight on Ladram beach. So it never entered his head that the ghost was a 'tape recording'. His first thought was that the old lady in grey might be some kind of thought projection – in other words, a kind of television picture, caused by someone else *thinking* about the ghost, and somehow transferring the thought into his own mind. Then it struck him that ghosts are supposed to reappear on anniversaries. So he and Mina decided they would go to the same spot at the same time the following year, and see what happened.

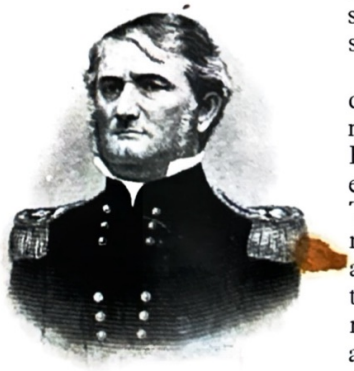
In fact, nothing happened. They stood quietly at the same spot, on a fine, warm morning, but the old lady failed to reappear. However, both of them noticed a kind of electrical tingling feeling in the atmosphere. There was a tiny underground stream running down the lane – under a drain cover – and they felt the tingling most strongly when they stood on top of it. Tom would only realise the significance of that tingling feeling after his experience on Ladram beach. And



Left: map showing the position of the ghost at Hole Mill in relation to the underground stream and its field of force. Lethbridge plotted the area 'blind' with his hazel twig. Later excavation showed this plot to be correct in every detail

Right: the 'witch's' house, Hole Mill, as seen from Hole House. This was the spot where Lethbridge saw the ghost of an old lady and experienced a curious tingling sensation when he stood over an underground stream. He later discovered that the two experiences were connected

Below: the Reverend Bishop Leonidas Polk, who intrigued Professor Joseph Buchanan in the 1840s by being able to detect brass in the dark simply by touching it with his fingers



then he decided to explore the stream and see where it led. The result confirmed his suspicions. The stream turned at right angles quite close to the witch's house. And it was directly above this stream that he had seen the old lady in grey. He had been connected to the spot by the magnetic field of the flowing water. But the witch, standing a few yards away from the underground stream, had seen nothing.

So Lethbridge had been quite mistaken to believe that his 'old lady' was some kind of television picture projected by someone else's mind, or a ghost that would return exactly a year later. It was almost certainly just another 'tape recording' – a kind of videotape recording this time – but in black and white, just like the huntsman he had seen in his friend's rooms at Cambridge.

It would be very satisfying to be able to add that he decided to investigate the apparitions, and found that a huntsman had died of apoplexy in the room in Cambridge, or that the old lady had drowned in the underground stream. No such neat, satisfactory solutions can be provided. And neither is it necessary. The huntsman had probably been a previous inhabitant of the rooms; the old lady had probably lived most of her life in Hole Mill – the witch's house. (From her clothes, Lethbridge thought she dated back to before the First World War.) But there is no earthly reason why the 'force field' of water should record only unpleasant emotions. The old lady might have been unusually happy or excited when she was 'photographed' on the field. Or perhaps she passed over the spot so often that her image finally became indelibly imprinted there.

How much evidence is there for the Lethbridge theory of ghosts and ghouls? Well, to begin with, it is worth noting that his 'tape recording' theory was by no means new. In America in the 1840s, a professor named Joseph Rhodes Buchanan was intrigued when a certain Bishop Polk told him that he could detect brass in the dark by touching it with his fingers; it produced an unpleasant taste in his mouth. Buchanan tested him and found it was true. He discovered that certain of his students also had the same curious ability. In fact, some of them could even detect different substances when they were wrapped up in brown paper. Buchanan decided that the nerves produce some kind of force field – he called it the 'nerve aura' – which streams out of the finger ends, and which operates like an extra sense.

A diagram showing the 'psyche-field' around a tree, plotted with a hazel twig. The shaded area shows the limits of the force field that can be 'picked up' by a dowser

A Hawaiian volcano erupting. In the mid 19th century William Denton gave a piece of volcanic rock to a sensitive who 'saw' a volcano exploding. This was one of the first serious experiments into psychometry – or object reading – and its results had far-reaching implications for dowsing

A strange talent

What really puzzled him was that some of his sensitives could hold a sealed letter, and describe the person who had written it, and whether the writer was sad or happy at the time. Buchanan explained this by suggesting that all substances give off emanations (another name for a force field) on which human emotions can be recorded. He had stumbled on Lethbridge's theory just about 100 years before Lethbridge.

Buchanan's friend William Denton, a professor of geology, took the theory even further. He tried wrapping a piece of Hawaiian volcanic rock in paper and handing it to a sensitive, who immediately saw in his mind an island in the midst of blue seas, and an exploding volcano. When handed a pebble of glacial limestone, the sensitive saw it frozen in deep ice. A fragment of meteor produced a picture of the depths of space, with glittering stars. Denton was so excited by all this that he believed he had discovered a new – or forgotten – human faculty, and that one day we shall be able to look back into the past just as easily as we can now look at the stars (which may have died millions of years ago) through a telescope.

Buchanan and Denton called this strange faculty *psychometry*, and for a few years it caused considerable excitement in the scientific world. Then, with the coming of Darwin, T. H. Huxley and the rest, a more sceptical climate prevailed, and it was forgotten. Even so, Sir Oliver Lodge, the notable scientist who dared to be interested in psychical research, wrote in 1908:

> Take, for example, a haunted house . . . wherein some one room is the scene of a ghostly representation of some long past tragedy. On a psychometric hypothesis, the original tragedy has been literally *photographed* on its material surroundings, nay, even on the ether itself, by reason of the intensity of emotion felt by those who enacted it.

It may seem, then, that Lethbridge's discovery was not so remarkable after all. That would be a mistake. For it was only a part of a far more comprehensive and more important theory of the paranormal.

The master dowser

During his career as an archaeologist Tom Lethbridge discovered dowsing – 'picking up' electrical fields of objects and reacting to them. But this breakthrough was only the beginning of a fascinating and important series of experiments

ALTHOUGH TOM LETHBRIDGE had no interest in ghosts or 'ghouls' before he retired to Devon, he had always been fascinated by dowsing.

It all started in the early 1930s, when he and another archaeologist were looking for Viking graves on the island of Lundy in the Bristol Channel. They located the graves, then, having time on their hands while they waited for the boat back to the mainland, they decided to try some experiments with dowsing. Hidden under the soil of Lundy Island are seams of volcanic rock that pass up through the slate. Lethbridge decided to see if he could locate these. So he cut himself a hazel twig, allowed his friend to blindfold him, and was then led along the cliff path, the forked hazel twig held tightly in his hands. (The twig has to be held with the forks bent slightly apart, so it has a certain amount of 'spring'.) Every time he passed over a volcanic seam, the hazel fork twisted violently in his hands. His friend had an extra-sensitive magnetometer, so he was able to verify that Lethbridge had accurately located every single one of the volcanic seams.

Above: Tom Lethbridge, the archaeologist who became a master dowser

Top: the island of Lundy in the Bristol Channel, where Lethbridge conducted his first experiment into dowsing. Using a forked hazel twig, he and a colleague dowsed for volcanic seams. The hazel twig located the seams by twisting violently when held over them

To Lethbridge, that seemed logical enough. Like running water, a volcanic seam has a faint magnetic field. Presumably he was somehow able to pick up these fields through the hazel twig, which reacted like a sensitive instrument. In one of his earlier books he wrote: 'Most people can dowse, if they know how to do it. If they cannot do it, there is probably some fault in the electrical system of their bodies.'

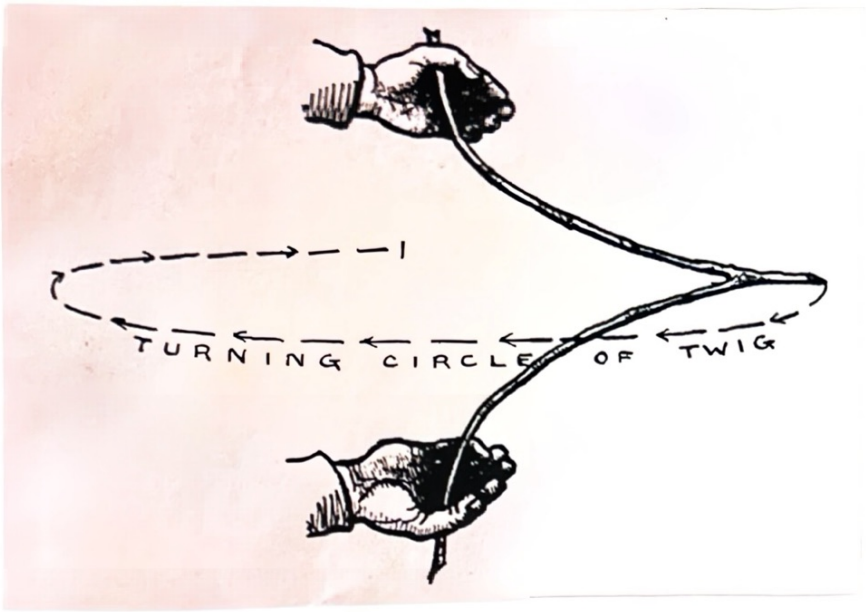
The garden of Lethbridge's house in Devon was full of interesting archaeological remains – some of them dating to Roman times. And, soon after moving in, Lethbridge remembered an experiment he had seen performed in the University Museum of Archaeology and Ethnology in Cambridge. Someone had asserted that a pendulum can tell whether a skull is male or female, and demonstrated this by dangling one over an ancient skull. The pendulum swung back and forth, which meant – apparently – that it was a man's skull. If it had swung round in a circle, the skull would have been female. Midwives sometimes use the same method to determine the sex of an unborn baby, dangling a wedding ring on a piece of thread over the stomach of the pregnant woman.

But how can such a method possibly work? It sounds completely absurd. Male

and female skulls do not have electrical fields; and even if they did, there is no reason why one of them should make a pendulum swing back and forth, and the other make it swing in a circle.

With characteristic thoroughness, Lethbridge set out to test it for himself. His first question was: if a pendulum can somehow respond to different substances, then how does it do it? A pendulum is, after all, just a weight fixed to the end of a piece of string. It must be the unconscious mind – or possibly the muscles – of the dowser that respond. But respond to what? The answer seemed to be: to some kind of vibration. In which case, it seems a fair assumption that different lengths of the pendulum respond to different vibrations.

It was the most fruitful assumption he ever made. And he set out to test it by putting a wooden bob on the end of a long piece of string, and then winding the string round a pencil, so he could lengthen or shorten the pendulum at will. Next, he put a piece of silver on the ground, held the pendulum over it, and then carefully began to lengthen the string. And, when he had unwound about 2 feet (60 centimetres), the pendulum suddenly began to go into a circular swing. Lethbridge measured his string. It was precisely 22 inches. (Lethbridge believed one could dowse successfully only using Imperial measurements. Feet and inches, he said, were 'natural' measurements based on the human body, whereas metric measurements were 'unnatural'. So pendulum 'rates' will be given in inches only.)



Above: the characteristic movement of a forked hazel twig when actively dowsing. Its usual – though not invariable – reaction when held over a subterranean stream, for example, is to turn in a circle from right to left

Left: the late S. J. Searles of North Cray, Kent, showing the power of the hazel twig as it pulls downwards when reacting to the presence of underground water

The pendulum reacts

Next, he went out into the courtyard of Hole House – which dates back to Tudor times – and walked around with his pendulum. At one place, it went into a circular swing. Lethbridge dug down carefully, and eventually located a small piece of Rhineland stoneware pottery. He tried his pendulum over it; it went into a powerful circular swing. That puzzled him greatly, until he tried his 22-inch pendulum over a piece of lead, and it also went into a circular swing. Apparently, 22 inches is the 'rate' for both silver and lead. And Rhineland pottery in the 17th century was glazed with lead.

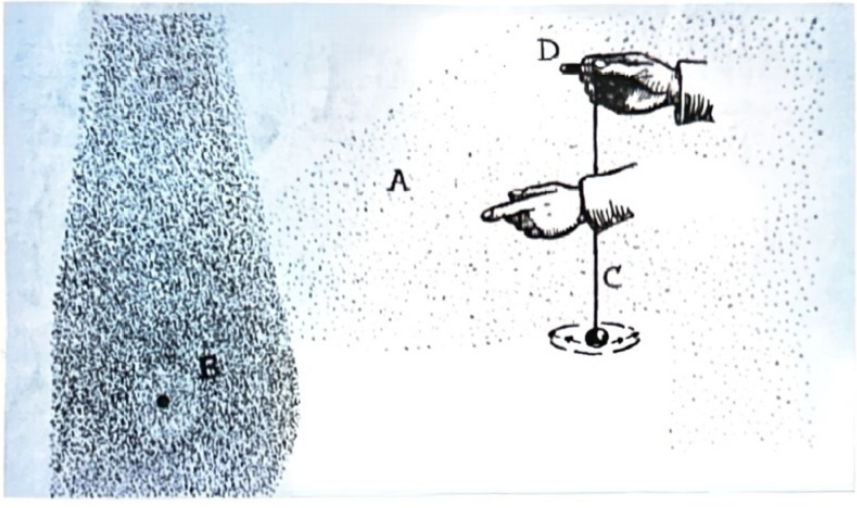
Now very excited, Lethbridge kept the pendulum at the same length and walked round the courtyard until it went again into a circular swing. He dug down, and found a bit of lead from an Elizabethan window. So he proved that the pendulum was accurate. He tried holding the pendulum over a copper pot, and found that it reacted at $30\frac{1}{2}$ inches. He walked around the courtyard until the pendulum responded, and this time, dug up a tiny copper tube. It was very small, so evidently the pendulum was extremely sensitive.

Convinced that he had made a major discovery, Lethbridge spent days testing all kinds of different substances with his pendulum and discovered, to his delight, that every one of them had its own 'rate': glass, sulphur, iron, slate, amber – even alcohol, garlic and apples. When he held it over a bottle of Australian Burgundy, the pendulum responded at 14, 20, $25\frac{1}{2}$ and 32 inches, which Lethbridge proved to be the 'rates' for glass, vegetable matter (the label), alcohol and iron.

He even tested a truffle – that delicious fungus that is used in *foie gras*. The pendulum responded at 17 inches. Trying to locate any buried truffles, Lethbridge stood with his pendulum in one hand, while pointing his other hand around in a slow semi-circle. When the 17-inch pendulum began to swing, he drew a straight line in the direction he was pointing. Then he went and stood several yards away, and repeated the experiment. Where the two lines crossed, he dug down with a trowel. He located a tiny, dark

Above the corner of the courtyard at the Lethbridge home, Hole House in Devon, where dowsing revealed a number of buried objects

Below: how dowsing with a pendulum works
A. dowser's psyche-field
B. static field of object
C. pendulum – where A meets B it begins to move in a circle
D. how the pendulum length is controlled by dowser



object, the size of a pea, and sent it to the Science Museum in London for identification. Incredibly, it turned out to be a rare variety of truffle.

There were still a number of minor mysteries – such as how to distinguish between lead and silver, when both react at 22 inches, or between truffles and beech wood, both of which respond to a 17-inch pendulum. Further experimentation solved that one. The number of times the pendulum gyrated was equally important. For lead, it gyrates 16 times, then goes back to its normal back-and-forth motion; for silver it gyrates 22 times. It looked as if nature had devised a simple and foolproof code for identifying any substance.

And not just substances. The pendulum also responded to colours – the natural colours of flowers, for example: 22 inches for grey, 29 for yellow, 30 for green, and so on. Lethbridge found himself wondering whether the pendulum would respond to thoughts and emotions as well as substances. A simple, two-part experiment convinced him that this was so. During his last excavations near Cambridge, Lethbridge had collected a number of sling-stones from an Iron Age fort. He tried his pendulum over them, and found that they reacted at 24 inches and also at 40. He fetched a bucketful of stones from the beach and tried the pendulum over those. They failed to react at either 'rate'. Now he divided the stones into two piles, and told his wife Mina to throw half of them at a wall, while he threw the rest. He tried the pendulum again. All Mina's stones now reacted at 29 inches (the 'rate' for females), while those he had thrown reacted at 24 – like the Iron Age stones. So it looked as if the Iron Age stones had been thrown by males. But what about their reaction to a 40-inch pendulum? Could it, he wondered, be the rate for anger or death? Lethbridge set the pendulum at 40 inches and thought about something that made him angry; immediately, the pendulum began to gyrate. So it looked as if 40 was indeed the rate for anger. He later ascertained that it was also the rate for death, cold and blackness.

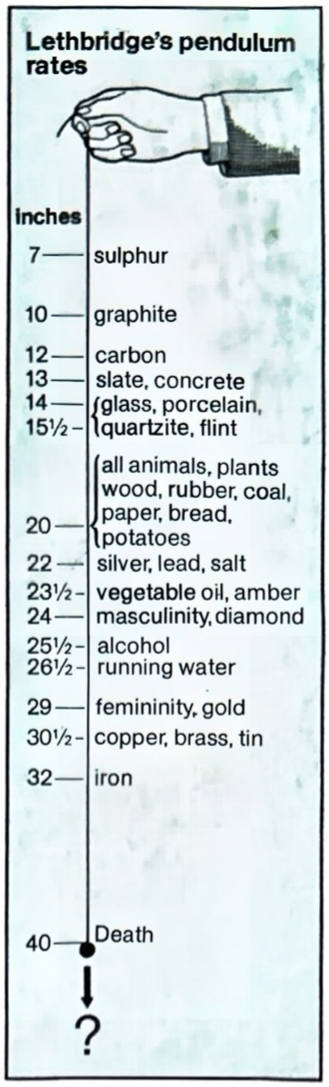
Now all this, admittedly, seems absurd. Yet Lethbridge repeated the experiments dozen of times, and each time he got the same result. The pendulum responded to ideas – like evolution, pride, life, danger and deceit – just as readily as to substances. Moreover Mina got the same results. And, through his experience of psychometry, Lethbridge realised that there is nothing very odd in a pendulum responding to ideas. If a 'sensitive' can hold an unopened letter, and somehow feel the emotions of the person who wrote it, then it seems reasonable to assume that human beings possess some 'sense' that registers these things just as our eyes register colours and shapes – a sixth sense perhaps? In fact, you could say that a pendulum is merely an aid to psychometry. A psychometrist – or sensitive – can pick up these vibrations directly; non-sensitive people, like Lethbridge, can only feel them indirectly through the pendulum.

After months of experiment with the pendulum, Lethbridge constructed tables of the various 'rates'; and it became clear that 40 inches was some kind of limit. Every single substance that he tested fell between zero and 40 inches. And at this point he discovered something rather odd. Sulphur reacts to a 7-inch pendulum. If he extended the pendulum to 47 inches – 40 plus 7 – it would still react to a heap of sulphur. But not when directly over the heap. It reacted only a little

to one side. The same was true of everything else he tried beyond 40 – the pendulum reacted, but a little to one side.

Forty inches is also the 'rate' for death. Was it possible, Lethbridge wondered, that when the pendulum registers beyond 40 inches, it registers a world beyond death – another dimension? He remembered an experience of being at the dentist, under anaesthetic, and finding himself outside his body – hovering up in the air, and slightly to the left – just like the 'displacement' reaction of the pendulum to the heap of sulphur.

He noticed another odd thing. Below 40 inches, there is no 'rate' for the concept of time; the pendulum simply will not respond. But when he lengthened the pendulum to 60 inches, he got a strong reaction for time. He



Above: table of pendulum 'rates' as discovered by Tom Lethbridge in the course of his experiments. Through trial and error he came to realise that the pendulum reacted consistently at certain lengths to specific substances, qualities and even abstract ideas

Left and right: mended pots that had been found in fragments in the courtyard and orchard of Hole House solely through dowsing. Lethbridge dowsed them to find their ages, finally coming up with the dates he scratched on the bottoms. Lethbridge achieved a high degree of accuracy – his dates for certain standing stones, for example, were later proved to be correct by carbon dating. As he said 'It may seem absurd, but it delivers the goods'

reasoned that because 'our world' – that is, the world that registers below 40 – is in time, there is no reaction to the idea of time itself – just as you could not appreciate the speed of a river if you were drifting down at the same speed as the current. But there is a reaction to the idea of time in this 'world beyond death'. Moreover, Lethbridge found that if he lengthened the pendulum beyond 80, he got the same result all over again – as if there is yet another world – or dimension – beyond that one. And this 'third world' also has a reaction for time. But when Lethbridge lengthened the pendulum beyond 120 inches he discovered that the 'world' beyond that also had no reaction for time.

Secrets of the 'other you'

Tom Lethbridge's own explanation of this strange 'power of the pendulum' is that there is a part of the human mind – the unconscious, perhaps – that knows the answers to all questions. Unfortunately, it cannot convey these answers to the 'everyday you', the busy, conscious self that spends its time coping with practical problems. But this 'other you' *can* convey its messages via the dowsing rod or pendulum, by the simple expedient of controlling the muscles.

Lethbridge had started as a cheerfully sceptical investigator trying to understand nature's hidden codes for conveying information. His researches led him into strange,

bewildering realms where all his normal ideas seemed to be turned upside down. He compared himself to a man walking on ice, when it suddenly collapses and he finds himself floundering in freezing water. Of this sudden immersion in new ideas he said: 'From living a normal life in a three-dimensional world, I seem to have suddenly fallen through into one where there are more dimensions. The three-dimensional life goes on as usual; but one has to adjust one's thinking to the other.' He did more than adjust his thinking; he set out boldly to explore the fourth dimension – and came to highly significant conclusions.

Gateway to other worlds

Tom Lethbridge progressed from finding hidden objects through dowsing to exploring the timeless world beyond death. By the time he died, he was being called the 'Einstein of the paranormal'

IN 1962, FIVE YEARS AFTER his move to Devon, Tom Lethbridge's ideas on ghosts, 'ghouls', pendulums and dowsing rods began to crystallise into a coherent theory, which he outlined in a book called *Ghost and divining rod*. This appeared in 1963, and it aroused more interest than anything he had published so far. It deserved to be so popular, for its central theory was original, exciting and well-argued.

He suggested that nature generates fields of static electricity in certain places, particularly near running water. These 'fields' are capable of picking up and recording the thoughts and feelings of human beings and other living creatures. But human beings are also surrounded by a mild electrical field, as the researches of Harold Burr of Yale University in the United States revealed in the 1930s. So if someone goes into a room where a murder has taken place and experiences a distinctly unpleasant feeling, all that is happening is that the emotions associated with the crime (such as fear, pain and horror) are being transferred to the visitor's electrical field, in accordance with the laws of electricity. If we are feeling full of energy, excitement, misery or anger, the emotional transference may flow the other way, and our feelings will be recorded on the field.

But if human emotions can be imprinted in some way on the 'field' of running water, and picked up by a dowser, then this world we are living in is a far more strange and complex place than most people give it credit for. To begin with, we must be surrounded by hidden information – in the form of these 'tape recordings' – that might become accessible to all of us if we could master the art of using the dowser's pendulum.

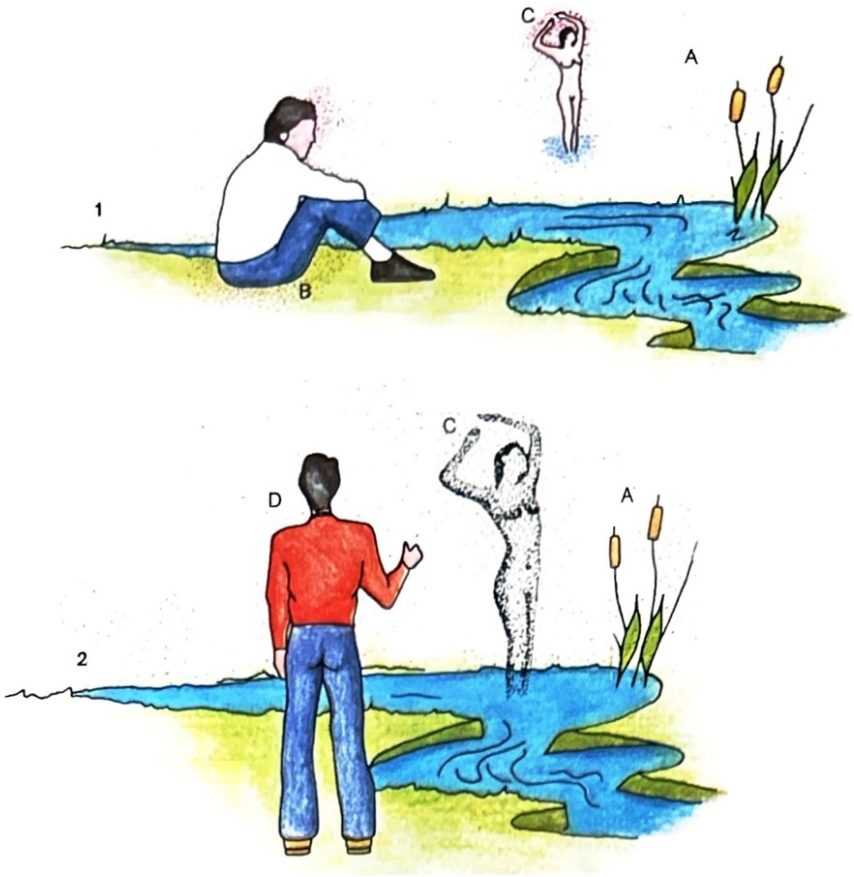
Above: Tom Lethbridge cataloguing some archaeological finds

Below: Saddell Abbey, Strathclyde, Scotland – a place of curiously strong and varied atmospheres: menacing in the castle, melancholy in the abbey ruins and peaceful at the wishing well. Lethbridge believed that 'atmospheres' are powerful emotions 'recorded' in the electrical field of water

It looks – says Lethbridge – as if human beings possess 'psyche-fields' as well as bodies. The body is simply a piece of apparatus for collecting impressions, which are then stored in the psyche-field. But in that case, there would seem to be a part of us that seeks the information. Presumably this is what religious people call the spirit. And since the information it can acquire through the pendulum may come from the remote past, or from some place on the other side of the world, then this spirit must be outside the limits of space and time.

It was this last idea that excited Lethbridge so much. His experiments with the pendulum seemed to indicate that there are other worlds beyond this one, perhaps worlds in other dimensions. Presumably we cannot see them – although they co-exist with our world – because our bodies are rather crude machines for picking up low-level vibrations. But the psyche-field – or perhaps the spirit – seems to have access to these other invisible worlds.

It also seems to have access to other times and other places. In May 1964, a BBC camera



team went to Hole House to record an interview with Lethbridge about dowsing. A young cameraman looked so dazed and startled as he got out of the car that Lethbridge asked him: 'Have you been here before?' The cameraman shook his head. 'No. But I've dreamed about it.' He asked if he could look behind the house. Pointing to a wall that Lethbridge had knocked down and rebuilt, he said: 'It wasn't like that years ago. There used to be buildings against it.' That was true – but not in Lethbridge's time. In the herb garden, the cameraman said: 'There used to be buildings there, but they were pulled down.' In his dream a voice had said, 'Now we shall be able to see the sea.' Again, it was true – but many years before, at the turn of the century. Now a row of trees blotted out the view of the sea.

The cameraman had never been in the area before, and he had no friends or relatives there who might have told him about it. Yet on five occasions he had dreamed about Hole House – as it was before he was born.

Lethbridge had always been interested in dreams, ever since he read J.W. Dunne's *An experiment with time* in the 1930s. Dunne was an aeronautics engineer, and around the turn of the century he had a number of impressive dreams of the future – for example, he dreamed accurately about the forthcoming eruption of the volcano, Mount Pelée, on Martinique. Dunne had suggested that time is like a tape or a film, which may get twisted or tangled, so that we can catch glimpses of

Above: diagram illustrating Lethbridge's theory about the creation of the world-wide belief in nymphs:
1. Aroused youth, pausing within the static field of a stream (A), vividly creates the image of a girl bathing (C) in his own static field (B). The image leaks into the weaker field (A) where it is 'recorded'.
2. Perhaps years later a passing youth with a weak psyche-field (D) comes into contact with (A) from which the image of the girl (C) leaks into his field (D). He thinks he has witnessed a supernatural being when he has really only seen the recording of a thought form

other times. He used to keep a notebook and pencil by his bed, and jot down his dreams the moment he woke up. He was convinced that we all dream about the future – probably every night of our lives – but that we forget it almost as soon as we wake up.

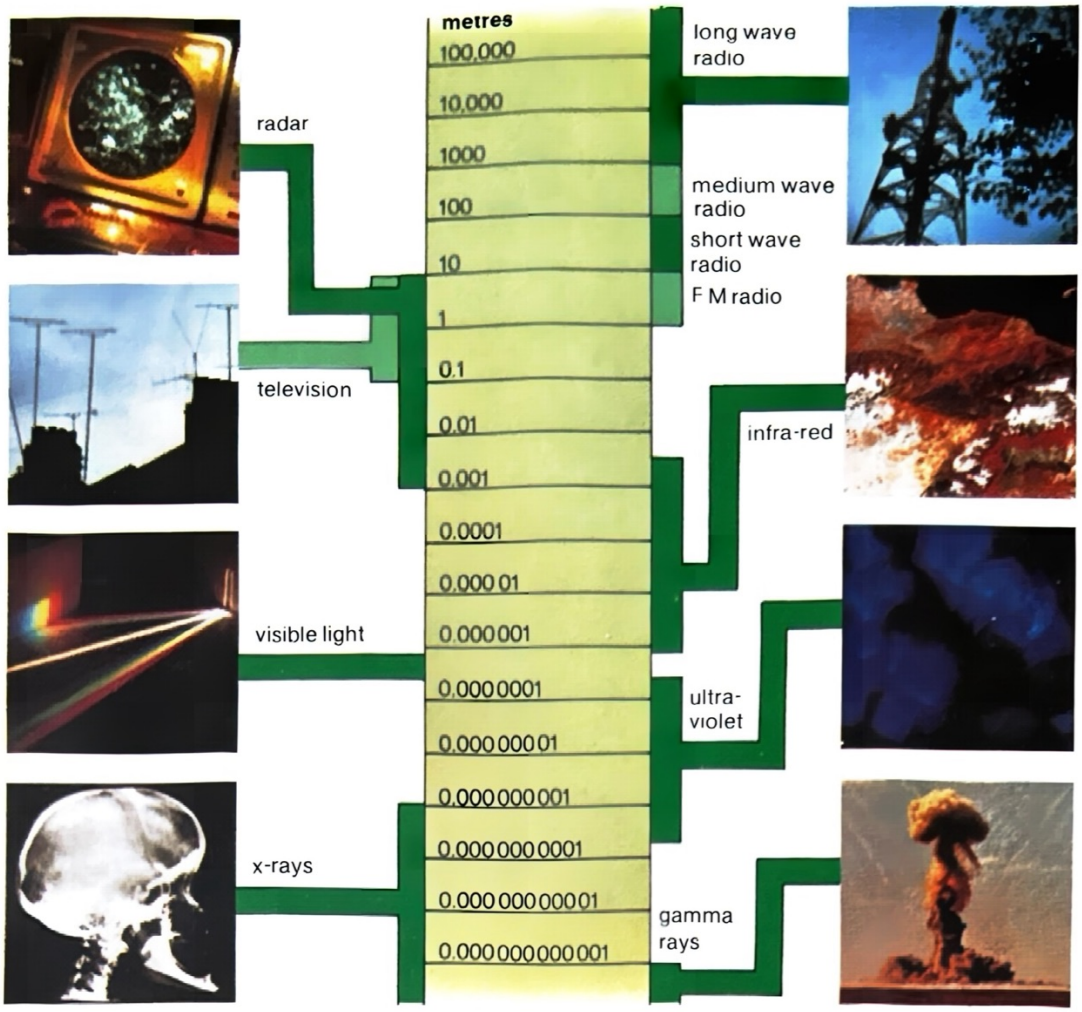
Lethbridge decided that if he wanted to study this mystery of dreams, he should keep a dream notebook. It was soon filled with his own vivid and idiosyncratic observations.

He became convinced that Dunne was correct in believing that we all dream of future events, but that most of these are so trivial – or so brief – that we fail to remember them. One night, he woke up dreaming about the face of a man that seemed to be looking at him out of a mirror. He was doing something with his hands, which seemed to be moving in the area of his chin. Lethbridge thought he might be shaving.

The next day, Lethbridge was driving slowly along a narrow lane; a car came round the corner, and at the wheel was the man he had seen in his dream. His face was framed by the windscreen – which Lethbridge had mistaken for a mirror – and his hands were moving in the area of his chin, on top of the steering wheel. Lethbridge was certain that he had never seen the man before.

He also noted that some of his dreams seemed to go backwards. He once dreamed of a furry snake-like object coming into his bedroom; but all the furniture in the room was reversed, as in a mirror. The snake-like object he recognised as the tail of their Siamese cat, walking backwards. A friend also told him about two 'backward dreams' she had had recently: in one, she saw a couple she knew walk backwards out of their door and drive their car backwards down a lane. In another, she saw some men walking backwards carrying a coffin, and one of them uttered the baffling sentence: 'Burnt be to

Right: eruption of the volcanic Mount Pelée, Martinique. J.W. Dunne, author of *An experiment with time*, had dreamed accurately of the event some time before it happened. This and other dreams convinced him that we dream regularly of future events but do not always remember these dreams



Left: the spectrum of electromagnetic (EM) vibrations. EM waves consist of electric and magnetic fields vibrating with a definite frequency, each corresponding to a particular wavelength.
In order of increasing frequency and decreasing wavelength, the EM spectrum consists of: very long wave radio, used for communication with submarines; long, medium and short wave radio (used for AM broadcasting); FM radio, television and radar; infra-red (heat) radiation, which is recorded in the Earth photographs taken by survey satellites; visible light; ultraviolet light, which, while invisible, stimulates fluorescence in some materials; X-rays; and high-energy gamma rays, which occur in fallout and in cosmic rays. The progressive discovery of these waves has inspired speculations concerning unknown 'vibrations' making up our own and higher worlds

enough good woods any.' On waking up, she wrote down the sentence, read it backwards, and realised that it actually said: 'Any wood's good enough to be burnt.'

But why, Lethbridge asked, should time sometimes go backwards in dreams? The clue was provided by his pendulum, which informed him that the energy vibrations of the next level – the world beyond ours – are four times as fast as those of our world. Lethbridge speculated that during sleep, a part of us passes through this world to a higher world still. Coming back from sleep, we pass through it once again to enter our own much slower world of vibrations. The effect is like a fast train passing a slower one; although the slow train is moving forward, it appears to be going backwards.

More impressive examples of precognitive dreams came from his correspondents. One woman dreamed of the collapse of a building as the side was blown out and heard a voice say: 'Collapsed like a pack of cards.' A month later a gas explosion blew out the side of a block of flats called Ronan Point in east London, and a newspaper report used the phrase 'Collapsed like a pack of cards'. Another correspondent described a dream in which he saw a square-looking Edwardian house with many chimneys being burnt down; a few days later, Tom saw a house of

The ruined London tower block, Ronan Point. A gas explosion ripped through the building causing death and devastation. One woman dreamed precognitively of the disaster, hearing the very words of the subsequent newspaper headline 'Collapsed like a pack of cards' spoken clearly

this description being burnt down on a television newsreel.

The more he studied these puzzles, the more convinced Lethbridge became that the key to all of them is the concept of *vibrations*. Our bodies seem to be machines tuned to pick up certain vibrations. Our eyes will only register energy whose wavelength is between that of red and violet light. Shorter or longer wavelengths are invisible to us. Modern physics tells us that at the sub atomic level matter is in a state of constant vibration.

Worlds beyond worlds

According to Lethbridge's pendulum, the 'world' beyond our world – the world that can be detected by a pendulum of more than 40 inches – consists of vibrations that are four times as fast as ours. It is all around us yet we are unable to see it, because it is beyond the range of our senses. All the objects in our world extend into this other world. Our personalities also extend into it, but we are not aware of this, because our 'everyday self' has no communication with that 'other self'. But the other self can answer questions by means of the pendulum. When Tom and Mina Lethbridge visited a circle of standing stones called the Merry Maidens, near Penzance in Cornwall, Lethbridge held a pendulum over one of the uprights and asked how old it was. As he did so, he placed one hand on the stone, and experienced something like a mild electric shock. The pendulum began to gyrate like an aeroplane propellor, and went on swinging in a wide circle for several minutes – Lethbridge counted 451 turns. Arbitrarily allowing 10 years for each turn, Lethbridge calculated that the circle dated back to 2540 BC – a result that sounds highly consistent with carbon 14 dating of other megalithic monuments like Stonehenge. His 'higher self' – outside time – had answered his question.

In 1971 Lethbridge was engaged in writing his book on dreams – *The power of the pendulum* – when he became ill and had to be taken into hospital. He was a huge man, and his enormous weight placed a strain on his heart. He died on 30 September, leaving his last book unrevised. He was 70 years old, and his life's work was by no means complete. Yet even in its unfinished state, it is one of the most important and exciting contributions to parapsychology in this century.

Lethbridge's insistence on rediscovering the ancient art of dowsing also underlined his emphasis on understanding the differences between primitive and modern Man. The ancient peoples – going back to our cavemen ancestors – believed that the Universe is magical and that Earth is a living creature. They were probably natural dowsers – as the aborigines of Australia still are – and responded naturally to the forces of the earth. Their standing stones were, according to Lethbridge, intended to mark places where the earth force was most powerful and perhaps to harness it in some way now forgotten.

Modern Man has suppressed – or lost – that instinctive, intuitive contact with the forces of the Universe. He is too busy keeping together his precious civilisation. Yet he still potentially possesses that ancient power of dowsing, and could easily develop it if he really wanted to. Lethbridge set out to develop his own powers, and to explore them scientifically, and soon came to the conclusion that the dowsing rod and the pendulum are incredibly accurate. By making use of some unknown part of the mind – the unconscious or 'superconscious' – they can provide information that is inaccessible to our ordinary senses, and can tell us about realms of reality beyond the 'everyday' world of physical matter.

Lethbridge was not a spiritualist. He never paid much attention to the question of life after death or the existence of a 'spirit world'. But by pursuing his researches into these subjects with a tough-minded logic, he concluded that there are other realms of reality beyond our world, and that there are forms of energy that we do not even begin to understand. Magic, spiritualism and occultism are merely our crude attempts to understand this vast realm of hidden energies, just as alchemy was Man's earliest attempt to understand the mysteries of atomic physics.

As to the meaning of all this, Lethbridge preserves the caution of an academic. Yet in his last years he became increasingly convinced that there is a meaning in human existence, and that it is tied up with the concept of our personal evolution. For some reason, we are being *driven* to evolve.

The ancient circle of standing stones known as the Merry Maidens near Penzance, Cornwall. While dowsing over the stones Lethbridge experienced a mild electric shock as if the stones were some kind of battery. But, persisting with his pendulum, he was able to dowse for the age of the stones. Later, more sophisticated techniques – such as carbon 14 dating – were used to date the Merry Maidens and Lethbridge's dating was confirmed

Twitches, twigs and treasure

Few people realise that water divining is only one aspect of dowsing – the technique of searching for objects or minerals with the aid of a rod, forked stick or pendulum. In this chapter, a professional dowser describes his mysterious skill

DOWSING IS ONE OF THE FEW AREAS of the paranormal that has measurable results with real practical value. Traditionally the dowser looked for minerals or divined for water; nowadays the professional is likely to be found looking for breaks in pipes or predicting failures in power cables. Prosaic matters, tackled in a routine manner – and yet, after centuries of study, we seem, if anything, to be further away from any understanding of how dowsing works.

Everything about the origin of dowsing is obscure. Even the term has no history: it has many variations, such as 'dousing', 'jousing' and the like, and the word seems to be just one of many dialect versions. According to Sir William Barrett, the subject's most thorough historian, dowsing has no place in the divination or the water-finding techniques of the ancient world. In fact the first real mention of the use of the divining rod in dowsing was not published until 1430, in a

Left Andrew Beasley, an Irish dowser, conducts a search with a map and a pendulum. He is frequently asked to find cattle or sheep lost in the rural area where he lives

Right dowsing as a method of mineral prospecting in the 16th century. In this woodcut from *De re metallica*, by the German mineralogist Agricola (Georg Bauer), published in 1556, a forked twig is stripped from a tree in the background and used as a dowsing instrument by the two figures marked A

Opposite below: two styles of dowsing. In an illustration from a work published in 1733, the dowser firmly grips a forked twig (left). Tom Graves, who has been called Britain's best-known dowser, traces a ley using a pendulum (right). This ley passes through Glastonbury Tor, visible in the background

Below: different manners of holding the divining rod, from a 17th-century treatise on occult physics by the Abbé de Villemont. The same diversity can be found among modern dowsers

German manuscript written by a mine surveyor.

At the time divining seems to have been used exclusively for mining, to find deposits of coal and ores. Agricola's classic treatise on mining, *De re metallica*, published in 1556, includes a detailed discussion of the subject, with a woodcut showing the various stages of divining for coal. By the end of that century further references appear showing divining to have been in routine use for many a year.

But not, it seems, for water finding. It was not until halfway through the following century that a French aristocrat, the Baroness de Beausoleil, adapted the use of the forked twig to find water supplies – the first mention of dowsing in what is now its best-known form, water divining. The French had a succession of 'star' dowsers, such as Jacques Aymar in the 17th century and Barthélemy Bleton in the 18th century, who attracted a fair amount of academic interest. But the newly rising sciences had no room for anything inexplicable in their terms, and for the next two centuries dowsing was consigned to the intellectual junk-heap, classified as ignorance, superstition and the workings of the Devil. One condemnatory work is interesting, though, in showing the incredible range of instruments used by dowsers at the beginning of the 18th century: not just forked twigs, but almost anything that would give the same effect, from a pair of scissors or a bucket handle to a twisted German sausage!

Most of the dowsers of these times were 'naturals', people with the perhaps unfortunate gift of twitching a little when they passed over water. When this small reflex movement was amplified by the fork they held, the result was a dipping of the rod. It worked – not without mistakes, failures or downright dishonesty at times, but well enough to be a routine part of country life. Many of these dowsers were professional

well-sinkers; some, like John Mullins at the end of the 19th century, even worked on the basis of 'no water, no pay' – and well-boring is an expensive business.

A good example of the kind of work Mullins and his contemporaries handled is quoted by Barrett in *The divining rod.*

> At Shepton Mallet Station on the Somerset and Dorset Railway, it was decided to sink a well close to the rails to supply water for the locomotives. We had sunk a depth of 250 feet [75 metres] entirely through blue lias rock as dense and hard as possible, and as dry as a bone, and began to look upon it as a forlorn hope. After much hesitation and fear lest it should turn out to be a hoax – we were very incredulous – it was decided to ask the advice of Mr Mullins, who came at once, and with very little trouble discovered for us close at hand that for which we had sought for so long. The most favourable spot was found to be about 50 feet [15 metres] from our well. Mr Mullins, from his observations of the action of the forked twig, advised us to drive a heading about 50 feet [15 metres] down the well. This was done, and when at that spot our miners had to rush up and out for their lives, leaving behind them their steel drills, hammers, clothes etc. The well soon filled up, and when we left in 1879 the water

Left John Mullins who was described by Sir William Barrett in the early 1900s as 'without doubt the most remarkably successful dowser of whom we possess records'. He was a stonemason when he discovered his gift in 1859, it was not until 1882 that he formed a company to find water by dowsing and to sink wells. Only a few failures on his part are known, in contrast with many hundreds of successes.

Below a test of Barthélemy Bleton, from the French province of Dauphiné, famed for its dowsers. Bleton was required to trace the course of the underground aqueduct of Arcueil in the garden of the Luxembourg Palace in Paris. He did this with great precision and successfully repeated the feat – now blindfolded – many times, before crowds of spectators.

was within 12 feet [3.5 metres] of the surface.

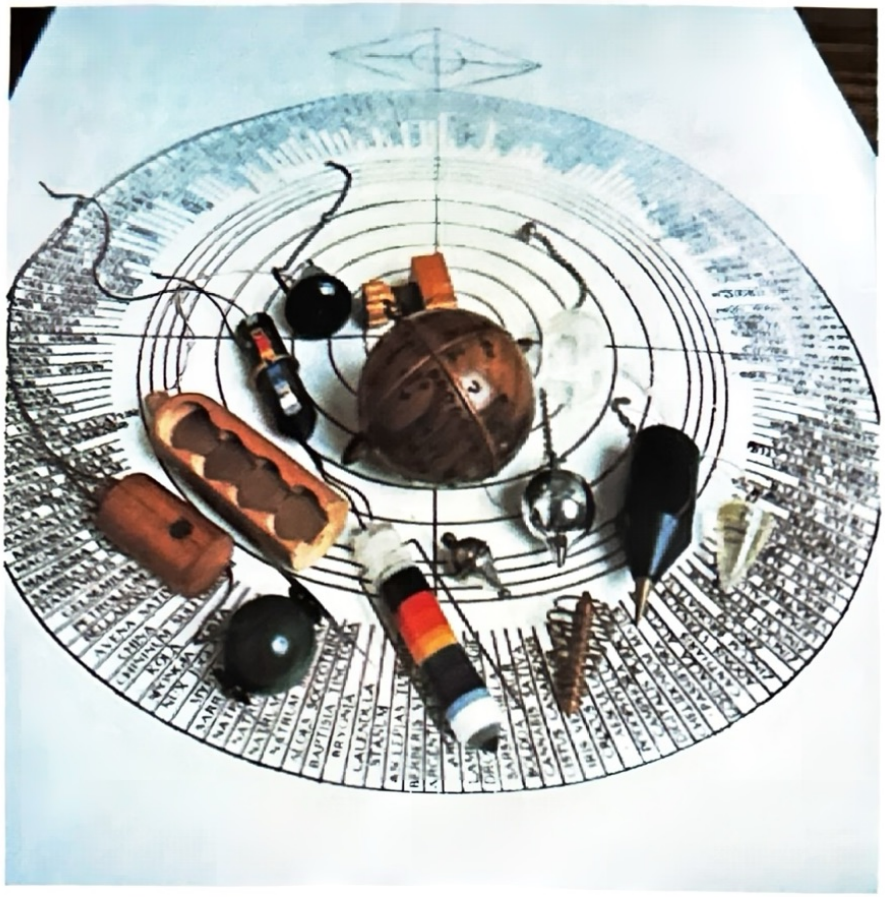
At this time dowsing was used only for water finding; it had little other use except for the occasional parlour game of finding hidden gold coins. But at the beginning of this century the other aspects of dowsing underwent a revival, particularly under the auspices of French clerics such as the Abbé Mermet and the new national dowsing groups. The applications, the techniques and every other facet of the subject suddenly became wider, more carefully studied – and more bizarre.

For example, a new instrument was added to the dowser's toolkit: the pendulum, typically a builder's plumb-bob or a small stone on the end of a piece of thread. With it came a whole new range of techniques and, more important, a new way of thinking about dowsing – using it as a general-purpose 'finding tool' rather than confining it to searching for water, minerals or the like. Most important of all, almost all of these new dowsers had taught themselves – and no particular 'gift' was involved, just hard work, like the learning of any other skill. They gave their forms of dowsing a new name – radiesthesia, 'sensation of radiations' – and promptly proved that what they were working with could hardly be radiations in the normal sense, because they produced reliable results working from a map rather than on the site.

Using these new techniques, the Abbé Mermet gained a great reputation in the 1930s for locating the bodies of missing people, working solely by holding a pendulum over a map. His book *Principles and practice of radiesthesia*, published in 1935, details some 30 cases, including that of a missing cow that had fallen over a cliff. The book also details his work in a bewildering variety of fields, from minerals to medicine to areas bordering on traditional magic.

One field that was developed extensively by these new dowsers between the wars was the use of dowsing as a diagnostic tool in medicine – so much so that the term 'radiesthesia' came to be applied to medical dowsing alone. It was not uncommon to find a consultant waving a pendulum over a patient; the pendulum would 'answer' a series of questions by gyrating in one direction or the other. One such consultant was Dr H. Tomlinson, who published in 1958 the first reasoned account of the mechanism of aluminium poisoning, using 'medical radiesthesia' as a diagnostic tool. Without it, he said in his book *Aluminium utensils and disease*, he considered himself 'blind, deaf and dumb'.

The practice may have been frowned upon by the medical profession, but nothing was done to restrain it, especially as the results were good in the hands of skilled physicians who knew what they were doing. However, when these dowsers moved into



Above: a selection of pendulum bobs used in medical radiesthesia. With a 'witness' of the patient nearby – a spot of blood or urine, or even his signature – the pendulum is suspended over the chart of remedies. The practitioner points to each in turn, and when the pendulum begins to swing or rotate the corresponding remedy is indicated

treatment, using the 'radionic box' of George de la Warr, an English engineer, the medical profession indeed became upset.

Treatment with this sophisticated instrument was, to say the least, complicated. A 'sample' from the patient – typically a blood spot or a urine sample – was placed in a tube between two magnets. The magnets were adjusted and a sequence of numbers was set up on various dials. These were said to be the frequency of the radiations of the illness affecting the patient. The reverse sequence was then set up and, via the medium of the 'sample', was transmitted back to the patient to counteract the illness. All most scientific-sounding.

However, the doctors did have a point: behind the impressive array of knobs, dials, switches and magnets on the radionic box was empty space, sawdust and very little else – certainly nothing that made sense in physical terms. The fact remains, though, that in many cases it worked. But, despite the maze of theories about 'etheric radiations' and the like, *why* it worked remains unexplained.

Another field in which the dowsers were active was archaeology. A good example of this work was the discovery of an older set of barracks beneath Kensington Barracks in west London. They were found in 1938, quite accidentally, by a dowser tracing the course of a Tudor brick-built water culvert. The dowser, L. L. Latham, found an awkward bend in the culvert, apparently going round something made of concrete. Latham then traced this and claimed that there was a rectilinear structure beneath two of the 18th-century barrack buildings. Sure enough, 17 feet (5 metres) down, there were the concrete foundations of a Roman fort. Further investigations will have to wait until the long-scheduled demolition of the surviving buildings.

Perhaps the most influential writer on the dowser's view of archaeology is Guy Underwood. Like other dowsers before him, and many more since, he found a curious coincidence: water lines (or whatever it is that the dowser perceives as underground water) coverge on sacred sites such as churches and prehistoric henges. Beneath every key point, he discovered, there was a 'knot' of these lines, a kind of hidden spring. Underwood was convinced that the sites had been built on specifically to mark the convergence of these natural lines.

To Underwood, and to many of his followers, the sites of the past represent the work of some kind of priesthood who were aware of these properties of nature – using them to settle boundary disputes, to decide the course of tracks and paths, and many other matters. Everything we see was predetermined by these patterns of the past.

Right: George de la Warr, an English engineer, became interested in radionics during the Second World War and, with his wife Marjorie, devised a number of radionic instruments for the diagnosis and treatment of disease

Dowsing at your fingertips

Most people find the very idea of dowsing incredible – yet with a little practice they can learn how to find buried objects or underground water for themselves. A dowser shows how to make divining rods and gives some practical advice on developing latent dowsing skills

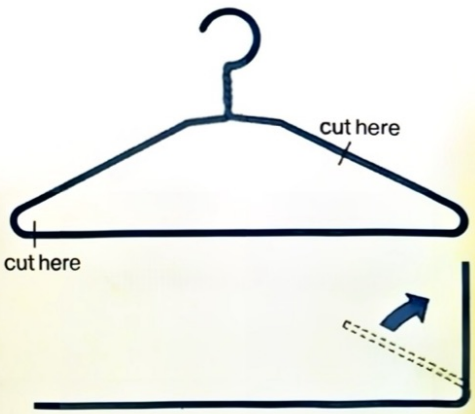
ONE OF THE MOST fascinating aspects of dowsing is that it is surprisingly simple to learn. Most people when they try it should have a fair chance of immediate success. Dowsing is essentially a skill, and you go about learning it in much the same way as any other practical skill. In many ways the hardest part in learning dowsing is in understanding that it is so simple: there is so little to it that it seems people have been forced to invent rules and complications simply for the sake of doing so.

Although dowsing is a highly unconventional skill, the dowser's responses conform to the same pattern as other reflex responses (such as the blink reflex that makes you shut your eyes when something approaches fast): they are better at noticing a contrast than a uniform 'target', so that a dowser will often find it easier to find a hairline crack in a pipe than to recognise that he is standing over a huge water reservoir. In most field work dowsers are sensing with nothing more paranormal than electromagnetic and other physical forces; the part that is still unexplained is exactly how the dowser can filter out the minute variations in such a force from the bewildering variety of information to be found.

The skill, in fact, lies in this filtering of information. It is common to all forms of

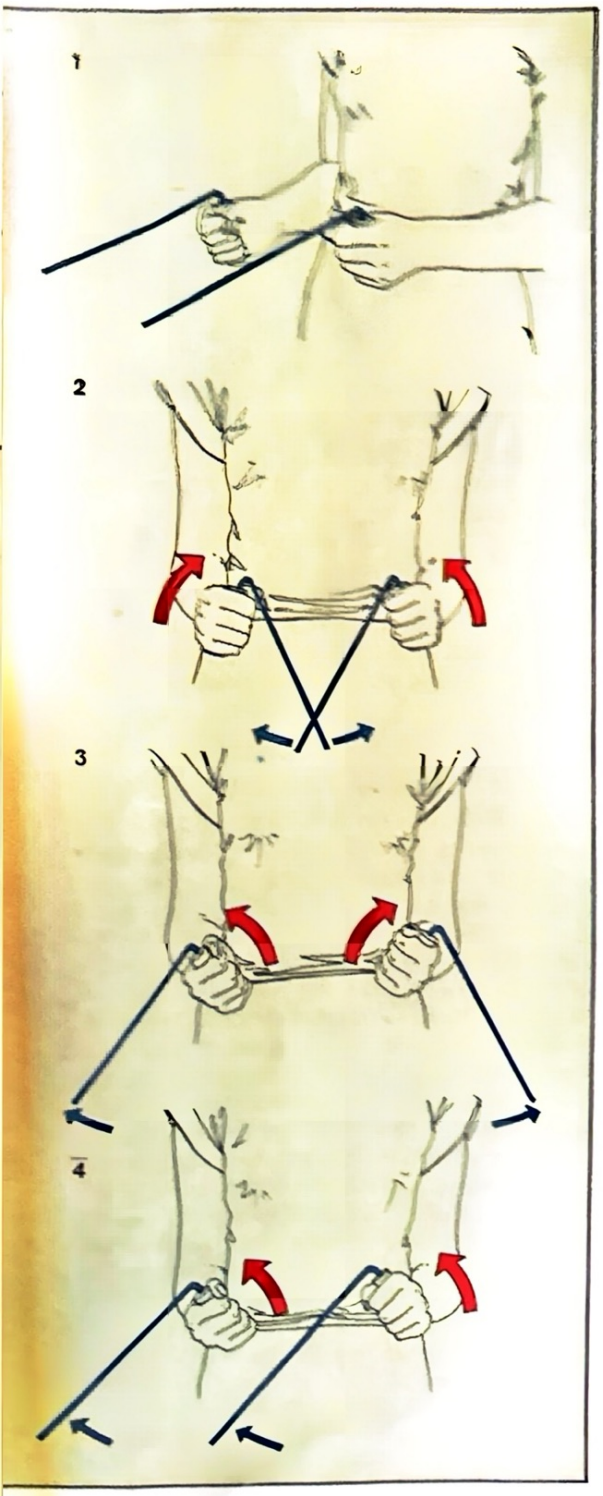
Ruth Lowe, a psychic, uses angle rods to dowse near the Bronze Age stone circle at Rollright in Oxfordshire. Many dowsers claim to be able to find not only minerals, underground water and buried objects, but also ley lines and areas of paranormal significance

A natural reaction



Angle rods – types of divining rod that are especially easy to use – can be made from a pair of wire coat hangers (above). In use they are held lightly in the closed fists, so that they are free to rotate. If preferred, they can rest in sleeves made of thin tubing, or dowelling through which a hole has been bored – or even a stack of two or three cotton reels. The neutral position of the rods is pointing straight ahead (1). If you tilt your fists slightly forwards, the rods will take up this position naturally. To become familiar with the behaviour of the rods, practise making them turn by small movements of your fists. This will help you to recognise the 'spontaneous' movements of the rods, apparently not caused by you. (In fact, such movements indicate involuntary reactions of your muscles, too subtle to be perceived.) Turning your hands inwards makes the rods swing together and cross (2), while twisting the fists outwards (3) makes the rods twist outwards. Twisting the fists in the same direction makes the rods swing to one side, while remaining parallel (4). Whenever such a movement occurs during a search, it has its own interpretation, which must be learned by experience.

perception, engineers speak of 'signal-to-noise ratio', computer users speak of 'fore-ground-background operation', but the most common term is 'the cocktail-party effect' – our ability to follow a conversation in a crowded, noisy room while ignoring all the other voices, or to ignore a clock's ticking until we are reminded of it. We select which items of information are to be meaningful – are to be 'signal' – and which ones will be ignored as 'noise'. We understand how these selection mechanisms work in machines, since we build in the mechanisms ourselves, but we have no idea how the cocktail-party effect in human perception works. Dowsing, however, is a way of putting it to use.



Angle rods in use by a dowser seeking water in a London garden. The rods have just swung into a crossed position, indicating the probable presence of water at that point – possibly in a domestic water main

The traditional hazel twig is quite difficult to use, and in any case is not all that common in the middle of a city, so you'll probably find it easier to use 'angle rods' to start with. These are just two lengths of bent wire – they can be cut from coat hangers.

To use them, hold one rod in each hand, the short arm of each resting in the loosely clenched fist, free to rotate. The long arm of each points straight ahead – it is easier if you tilt them down a little from the horizontal, so that they are parallel to each other, pointing ahead of you. Hold them about body-width apart. You should look as if you're going into a gunfight holding some very thin pistols!

x marks the spot

Using angle rods is rather like learning to ride a bicycle. On a bicycle, you have to begin by thinking about what you are doing. But once you have got the knack of balancing the bicycle, you no longer have to worry about it, and you can concentrate on directing the bicycle where you want to go. The same is true of the rods. In their neutral position – pointing straight ahead – they correspond to the bicycle rolling forward: with a little practice they will stay in that position, regardless of uneven ground, wind or other disturbances. But as with the bicycle, which is useless if it will travel only in straight lines, the rods must be capable of changing their position, to indicate clearly when your body has reacted to whatever it is that you are looking for.

Given that the rods' normal or neutral position is parallel, pointing forward, three significant types of reaction are: the rods cross over, both swing round while remaining parallel, or only one rod moves. The last, for the moment, we will consider to be a mistake. The first response, signalling 'x marks the spot' as you move over the target object, is the most common type of reaction. The parallel movement tends to indicate a direction, such as the line of a pipe or cable. It needs practice to interpret it correctly, and rather more detailed advice than can be given here.

For a while, just wander around, holding the rods, making sure that they can move freely but yet remain balanced. Don't worry about looking for anything in particular at first – just play with using the rods. This is where the knack comes in: you need to be able to recognise when the rods are moving because of something such as wind or rough ground, and when they seem to be moving of their own accord.

The strangest part is that the rods may well seem to have a life of their own; it is perhaps a good idea to remember that they don't: it is your hands that move them. It might feel otherwise, but this effect is similar to that produced in a familiar childhood game: you press outwards hard against a door frame, your palms inwards; when you stop

pressing, you find your arms move upward of their own accord. The motion is quite involuntary – as are the movements of the dowser that control the divining rod. The latter, however, are imperceptible.

So far you have simply been experimenting, without looking for anything in particular, and any results – such as the rods crossing over – have been 'noise', rather like the noise produced by an untuned radio. It is now time to be specific about what you are looking for, in order to learn what should be taken as 'signal' rather than 'noise'.

There seem to be no rules at all in dowsing regarding the method of targeting: almost anything that reminds you of what you are looking for will do, it seems. Some people use a sample of what it is they are looking for – holding the rod against a small bottle of water or a matching piece of cable, for example. Others use coloured discs to symbolise the object, others perhaps a written description of the object, and so on.

All these techniques are, in the end, ways of reinforcing your image of what you are looking for. Without a clear image of that object, it is very difficult to ensure that the angle rods will move in a way that is clearly recognisable. So another knack that is useful in dowsing is the technique of visualisation, of 'imaging' some object. For example, hold an imaginary orange in your hand. Even though it is not physically there, make it real in your imagination. Feel its texture. Take an imaginary knife, cut the orange open – feel the knife breaking through the tough peel, smell the tang as the juice reaches the air. Taste it!

Now do the same for a sewer or a gas main, and you will appreciate that dowsing has its unpleasant aspects.

Practise for a while, looking for pipes and cables. (But not both simultaneously.) Remember that the reflex response you are trying to use works best with contrasts rather than with featureless targets and works easiest with something physical to get to grips with; so try it first with running water or with an electric cable that is in use at the time. It is probably better if you look for a target in a location that is unknown to you, in some area where you can check your results – such as a water main at a friend's house.

Dowsing in depth

Finding something is one thing; finding how deeply buried it is, or how big it is, is another matter. This is where dowsing becomes even more bizarre. To find depth, for example, find the position of the object – a pipe, say – and stand over it. Now start again; only this time look for the depth of the pipe. If you like, while you are walking along, imagine yourself walking downward, actually through the earth to the pipe. At some point you should now have a completely new reaction. The distance out from the point where you started – and which you marked for reference – to where you are now is probably the distance down from your starting point – distance out equals distance down. (This is known in dowsing circles as the Bishop's Rule, after a French bishop – who, in fact, was not the first to use it.) But sometimes this rule proves ineffective for some people – they find 'distance out is half distance down' a better guide – but it should give the general idea.

The two important points here are: first, that you can change as you go along, in the same way that you can retune a radio to select different stations; and secondly, that this gives you some kind of check on your progress – a house water main will never be 50 feet (15 metres) down, for example!

This should also help to illustrate what was said earlier – that dowsing is perhaps best described as a state of mind. You will certainly find that your mental attitude has a critical effect – in both senses of the word – on the dowsing process. The trap is that a negative approach – 'it can't work, of course', or 'I suppose it will never work for me' – will usually interfere with or jam up the whole process. But the same is true of an overconfident approach – 'it must work for me' – trying too hard and concentrating fiercely, rather than just being receptive. So don't be pessimistic, don't try too hard – just let it work by itself.

A dowser using the traditional hazel twig. Many accounts speak of dowsers and witnesses attempting to hold down the divining rod and finding it impossible to do so when the diviner reached what he was seeking

Pitfalls and the pendulum

What moves the divining rod? All manner of causes – invariably modelled on the latest ideas of science – have been suggested. But it is doubtful that theorists will be able to account for all that we know today of the rod's paradoxical properties

Above: a dowser holds a forked rod in his upturned hands. Those who believe in dowsing and those who are sceptical agree that the rod's twisting is caused by tiny muscular movements – but how are these linked with the object sought?

Above right: dowsing was satirised in *Pantomysterium*, a German book published in 1700. Here a dowser displays a variety of 'divining rods' – pairs of scissors, a crossed knife and fork, and even a pair of clay pipes. He is tweaking the nose of a curious head symbolising the City of God; behind him another dowser is similarly irreverent towards a priest. In the background the mystery of dowsing is explained: a rod is caused to move by a thread tugged by a tiny imp

DOWSING IS FASCINATING because it shouldn't work, according to contemporary views of reality. It throws a spanner into the works of scientific theory. The problem for the guardians of reality, the 'explainers' – priests in earlier times, scientists today – is that dowsing refuses to fit into any theoretical scheme. However you try to contort it, there is still something, some aspect, that refuses to be explained. If you describe it solely in physical terms, you cannot explain map dowsing; if you describe it in psychic terms, you leave out of account the 'hard' physical phenomena, such as minor magnetic or gravitational field changes that have been detected in association with dowsing; and so on.

In fact most interesting insights can be gained from watching the contortions of the 'official explainers' as they struggle to enclose a subject that just will not fit into their schemes of reality. A prize example, perhaps, was the sad attempt a few years ago by the London mathematician Professor John Taylor to define and explain dowsing. He started, he said, with the premise that there are only four forces in the Universe: electromagnetic, 'weak' and 'strong' nuclear, and gravitational. Dowsing *must* employ one of these, *almost certainly* the electromagnetic force, and *almost certainly* the low microwave frequency range. But while dowsing phenomena were occurring he could not record any definite activity on his microwave detectors. Therefore, he said, there was nothing for his equipment to observe; therefore there can have been no phenomena; therefore dowsing does not exist and cannot work.

The woolly reasoning and non-science are so blatant here that even the weekly magazine *New Scientist* complained – despite the apparent preference of that magazine, as many who are interested in the paranormal will know, for 'knocking' reports on dowsing and on the paranormal in general.

Such a response from a scientist is not too surprising: anything that does not fit within the current framework of science is dangerous, and dowsing is one of many paranormal phenomena – sometimes dubbed 'Fortean'

'A murderous matter'

Jacques Aymar was born in 1662 in Dauphiné, southern France, an area noted for its water diviners. He became a dowser and found one day that his talent took an unusual direction. Digging at a spot indicated by the rod, he found, instead of water, the head of a murdered woman. At the woman's house (right) his rod reacted to the widower – who promptly fled. Aymar immediately acquired a reputation as a finder of criminals.

In his most celebrated case he was required to find the murderers of a wine merchant of Lyons and his wife. The rod led him along a circuitous route on the right bank of the Rhône. When the rod was active Aymar became feverish, his pulse raced, he felt faint and even spat blood. He announced that the trail had been left by three murderers. Along the way he indicated houses that the fugitives had entered, and his claims were confirmed. The trail led him, partly on land and partly on the river, to an army camp – but, he declared, the criminals had recently departed. Eventually Aymar led his armed escort to the prison in the town of Beaucaire, fully 150 miles (240 kilometres) south of Lyons. Here the rod indicated a man who had just been arrested for a petty larceny. Denying all knowledge of the murders, he was led back to Lyons by the route Aymar had indicated. Overwhelmed by the accuracy of Aymar's knowledge, the man confessed to the crime; eventually he was broken on the wheel. Aymar continued to follow the trail of the other two criminals until it crossed the French frontier and he had to end the search.

Aymar stated that the violent agitations that he felt when pursuing murderers were absent when he was searching for thieves, water or money. It was speculated that he could detect a *matière meurtrière* – a 'murderous matter' – given off by murderers. He replied that, on the contrary, he followed not a 'generally murderous' trail, but the path of a specific person.

phenomena after paranormal researcher Charles Fort – that are fascinatingly obstinate in their refusal to fit within *any* framework, scientific, religious or otherwise.

Since the rise of modern science in the 16th and 17th centuries, there has been a continuous sequence of protectors of the current view of reality, the current 'paradigm'. First the Inquisition, then varying brands of religion, and then the new Inquisition of the scientific establishment. We can see these changes, these revolutions in thinking, reflected in the explanations that were offered for dowsing at the time; and since it still remains unexplained, it gives us an insight into the limitations of the current view of reality as well.

The work of evil forces

The earliest detailed attempts to explain dowsing (as opposed to merely giving practical descriptions) appear during the 17th century. In the main they were written by learned divines, Protestant or Catholic, who generally regarded dowsing as the work of evil forces. Perhaps they were influenced by Luther's condemnation of the activity: he listed it among practices that violated the commandments against worshipping false gods and graven images. But a Jesuit priest, Athanasius Kircher, wrote in 1641 on the divining rod – which he refused to call by that name, preferring terms free of the suggestion of magic, such as *virgula metalloscopia* – and asserted that after making numerous trials he was convinced of its efficacy. He was the first to state that the rod moved because of the unconscious muscular movements of the dowser, claiming that he had demonstrated this by experiment.

However, in 1658 a dissertation at the University of Wittenberg, in Germany, discussed the questions of whether dowsing was due to the action of an 'occult force'. The author decided that, while the rod really did move, occult forces were not the cause: usually fraud was to be blamed – and the remaining cases were due to a pact with the Devil.

The frontispiece of *The idol unmasked* of 1704, by Theophilus Albinus, is a beautiful illustration of the unmasking of a dowser, while Zeidler's slightly earlier *Pantomysterium* shows the tip of a rod being pulled by a string in the hand of a tiny demon. It is worth remembering that in these times 'the work of the Devil' was as convenient a blanket term for inexplicable phenomena as 'supernatural' is today.

One of the most sensational cases in the

Left: a congress of dowsers, photographed in 1913. In the centre is the Abbé Mermet, demonstrating the use of a pocket watch as a dowsing pendulum. Mermet was noted for his ability to find the bodies of missing people, working at a distance with a map

Below left: Charles Adams of Rowberrow in Somerset, portrayed in a pamphlet published in 1853. The author, Francis Phippen, was a journalist who, while on a visit to Somerset, was impressed by the widespread use of dowsing. Adams claimed to 'see' underground springs clairvoyantly while the rod was indicating them

history of dowsing nicely illustrates this point of fashions of thought. One Jacques Aymar, a citizen of Lyons, France, with the improbable-sounding ability to locate criminal activity by dowsing, was called on in 1692 to find the murderers of a wine merchant and his wife – which he did. The interesting point is that the 'explainers' of the time stated that Aymar's rod reacted to some 'murderous matter' given off by the murderer. This sounds naïve now; but it is important to note that this explanation was entirely in tune with the then current description of reality: that all matter was linked by corpuscles of different qualities passing through an invisible ether.

Contemporary explanations of dowsing are typified by this description by William Pryce, written in 1778:

> The corpuscles . . . that rise from the Minerals, entering the rod, determine it to bow down, in order to render it parallel to the vertical lines which the effluvia describe in their rise. In effect the Mineral particles seem to be emitted from the earth; now the Virgula, being of a light porous wood, gives an easy passage to these particles, which are also very fine and subtle; the effluvia then driven forwards by those that follow them, and pressed at the same time by the atmosphere incumbent on them, are forced to enter the little interstices between the fibres of the wood, and by that effort they oblige it to incline, or dip down perpendicularly, to become parallel with the little columns which those vapours form in their rise.

At this point, dowsers were certain that the rod moved under the action of external mechanical forces; the dowser played a purely passive role. In the 19th century, new theories of dowsing became fashionable:

electricity, the so-called 'Odic force' of Baron von Reichenbach, a 19th-century German chemist, and the 'animal magnetism' of Franz Mesmer appear in one form or another. By the beginning of the present century, 'resonance' was in fashion – a fashion that still seems to hold sway. The influential Abbé Mermet based his theories on the assumption that all bodies without exception are constantly emitting undulations or radiations. The human body enters these fields of influence and becomes the seat of nervous reactions, of some kind of 'current' that flows through the hands. If an appropriate object, such as a rod or pendulum, is held in the hand, the invisible flux is made manifest in the movements given to this object, which acts as a kind of indicator.

Obsession with radiation

Like the earlier explanation of dowsing, the 'corpuscular' theory, this idea of 'radiations' is in accord with the main physical theory of its time, that of energies transmitted as the waves of the electromagnetic spectrum. As Mermet was writing his desciption, in the early 1920s, the older theories were giving way to the more complete but utterly paradoxical quantum theory, in which energy exists as waves or particles, according to the circumstances.

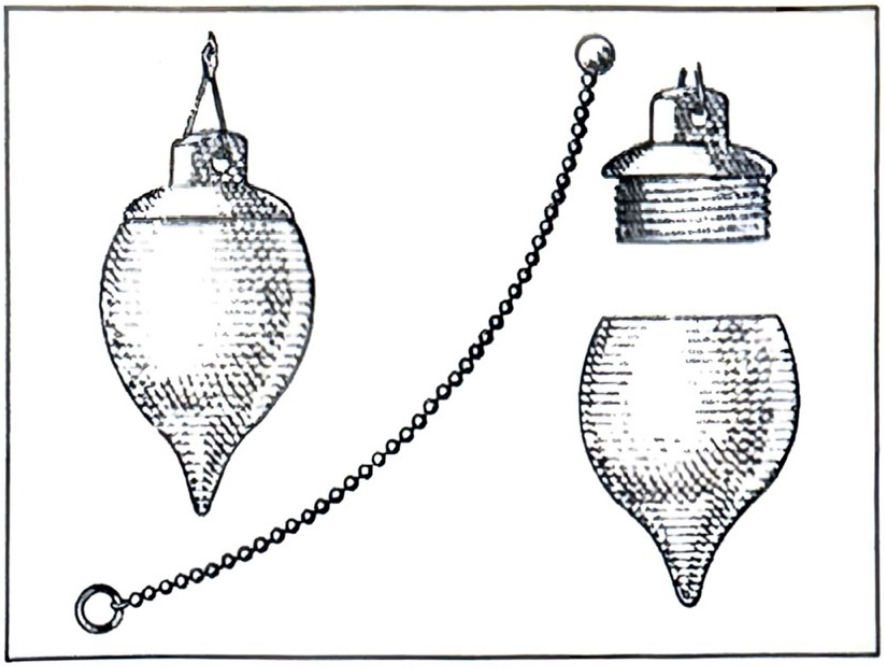
This emphasis in dowsing literature on 'radiations' of a doubtful nature becomes almost an obsession in certain types of medical dowsing. In radionics in particular, some kind of radiation was (and by many people still is) supposed to resonate with the circuits in a 'black box', containing an assortment of magnets and other paraphernalia. Although a great deal of research was done to try to identify the nature of the supposed radiations – particularly by the De la Warr Laboratories – the nearest they could come to a conclusion were vague hints that the

'radiations' were linked to 'matter in the making', to 'new worlds beyond the atom' (the titles of two books by George de la Warr).

But not all attempts to relate dowsing to modern physics are so unsuccessful: there *is* a physical side. During the middle part of the present century – over some 30 years – various groups of researchers tried to pin down physical forces associated with on-site dowsing. S.W. Tromp in Holland and, particularly, J.C. Maby and T. Bedford Franklin, working on behalf of the British Society of Dowsers, ploughed through experiment after experiment, noting physical phenomena apparently associated with the dowsers' response.

And parallels were found. Franklin and Maby's work covers effects of and interactions with the Earth's magnetic fields, background cosmic radiation levels (an interesting parallel here with some of the results of the pioneering Dragon Project work on standing stones in Oxfordshire), weather, radio waves and many other phenomena; Tromp produced much the same results independently, and then concentrated more on the physiology of the dowser and the dowsing response. Maby *almost* succeeded in developing an automatic dowsing instrument; Tromp pinned down the physiological mechanism as a precise and predictable reflex response in the dowser, which needed the dowser's instruments only to make the response more obvious. Tromp must also take most of the credit for proving at last that the dowser's rod does not move of its own accord – despite his own impressions, the dowser does in fact move it.

This is all very well, but it doesn't really help either. If you read through Maby's and Tromp's work, it becomes clear that the only thing that was predictable was that there would be *some* such physical parallel – but probably a *different* physical force each time. At each point at which the physical mechanism seemed to have been pinned down – weak magnetic fields at one point, microwaves at another – the particular 'parallel' would suddenly become inconsistent.



The dowsing pendulum devised and patented by the Abbé Mermet. 'Witnesses' of the object being sought could be placed in the hollow bob: some article connected with a missing person, for example, or water if the dowser was searching for a spring

The same thing happens in many areas of the paranormal; as soon as you think you have found out 'how it really works', the apparent physical mechanism promptly changes to something else. There is even a technical term to describe this – the 'bloody-mindedness' of paraphysical phenomena!

What we do know more about is how it can *be* worked – a technological concern rather than a scientific one, leading to a 'magical technology', if you like. We know that dowsing works essentially by reflex reaction in the dowser, and follows all the usual rules for perception. As with any perceptual mechanism, it responds best to contrast rather than a constant 'background', however strong; it is subject to personal experience and interpretation, on the lines of the paradox 'things have to be believed to be seen'; and it can work by means of a wide range of stimuli, and the interactions of any or all of the forces that cause those stimuli. The only oddity is that it does not seem greatly to care whether physical forces are involved or not.

What does matter is that the dowsing ability exists in all of us in one form or another – to throw a spanner in the works of our conventional thinking and to span the gap between the normal world of technology and the not so normal world of paraphysics, and between theoretical belief and practical action. It is, by its nature, absurd – impossible to explain in any way that covers all its aspects. But it is there, fascinating as ever, to be enjoyed and studied and used, as it has been throughout the ages.

Map dowsing makes nonsense of any theory that explains dowsing by 'radiations' from the target object influencing the dowser; its effectiveness is independent of distance, quite unlike any type of radiation known to science

An underground movement

The five dowsers of the Priddy Project worked under the glare of television cameras – to locate pot-holers in the deep caves and tunnels of Somerset. The results of their experiment were astounding

JAMES RANDI, the American conjurer, claims to have spent the years since the early 1950s on a fruitless search for paranormal abilities despite his offer of $10,000 for a satisfactory demonstration. He reports a dismal response from psychics of all kinds, including dowsers. In fact, since his aggressive confrontation of metal bender Uri Geller in 1973, Randi has been embarrassing psychical researchers all over the world.

In July 1980 Randi carried out a test of dowsers at Sydney in Australia. He buried 10 plastic water pipes, some empty and some with water, 20 inches (50 centimetres) deep in a ploughed field. The dowsers were prevented from seeing this operation and from knowing which of the 10 pipes were carrying water. Randi felt confident that trickery would be out of the question. He also hid brass and gold in one of 10 cardboard boxes scattered over the field.

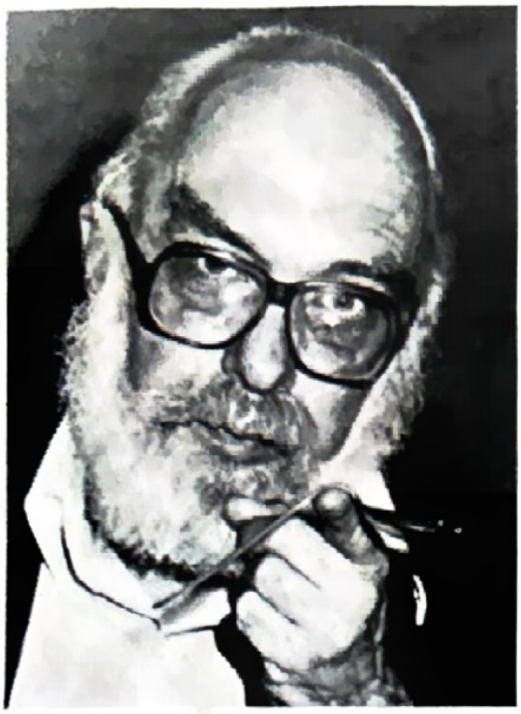
The dowsers faced a test in which anyone could expect a one in 10 success rate purely by chance. They hoped to make a significant improvement upon the chance results, but they were disappointed. In 50 runs over the pipes they were correct on 11 occasions, which was better than chance, but they managed to detect the box containing the metal only four times in 61 trials – a rate of only one in 15.

The dowsers had claimed in advance that they would achieve a success rate of 85 to 100 per cent, and Randi ruled that they had failed on their own terms. He further refused to accept that the above-chance results in the water divining test were evidence of genuine phenomena. The cheque for $10,000 did not change hands.

Randi's Australian test illustrates the problem of mounting a demonstration of dowsing. Eight years earlier, in 1972, the BBC produced a fascinating television programme on the subject. Dramatic results were hoped for even though previous television tests were anything but conclusive, particularly where dowsers were challenged to locate objects hidden by the television team.

Failures were attributed to 'stage-fright'. As for the successes, no matter how carefully the target objects were concealed, it was impossible to ensure that there were no signs that could be perceived subliminally by the dowsers, giving away the hiding places. Non-verbal clues might have been betrayed

Left to right: dowsers Donald Curry, Pat Lucas, John Williamson, Bill Lewis and Betty Risden meet the cavers who took part in the Priddy Project. The dowsers were not told the aim of the experiment until the very last minute: they had to plot a cave system and locate pot-holers who were moving through the tunnels



Left James Randi, the American conjurer, carried out a test on dowsers at Sydney in Australia in 1980. He concluded that there was nothing paranormal in the way the dowsers achieved their results, even though they scored above chance on the most important part of the experiment.

by the test team. For example, as the dowser gets near to the target it is hard for onlookers to control heart rate and eye gaze; so the team could unconsciously have helped. It would be impossible to control any telepathic link between the dowser and the television team members who knew the hiding places. Could they unwittingly have guided the dowsers to success?

How could a test be devised to overcome these pitfalls? Could something be hidden in a way that would leave no trace and, at the same time, prevent the television team unconsciously aiding the dowsers in their search? With these questions in mind, a study was begun – a study that would both recruit dowsers and help in the design of a convincing television programme.

The first to help was Pat Lucas of Monmouth in Gwent. She had discovered her ability to divine water when her husband was trying to locate a new supply for their farm. She had copied an old dowser's technique and, to her surprise, was successful. This led to immediate employment by a local contractor who specialised in sinking boreholes in remote places.

The next volunteer, Bill Lewis, was also from Gwent, a retired electrical engineer from Abergavenny. Since his work on this project, Lewis has become one of a handful of extremely gifted British practitioners consulted for map and medical dowsing. To illustrate this latter skill, he examined the BBC team reporter, Linda Blandford. He ran his hands over her a little way above her body, and made a number of confident diagnoses before coming to a halt over her hip. He used a pendulum, seemingly to answer a few unspoken questions, and then announced: 'I'm rather puzzled about this. I'm picking up metal. I've met cases of steel pins in hips, but this is puzzling me. It's not a metal I'm familiar with.' In fact the reporter had suffered a skiing accident in Switzerland, which resulted in the use of an alloy plate and pins in her hip. Lewis's reading, subsequently endorsed by a doctor, was impressive, but there was no way of knowing whether Linda Blandford had helped him with his diagnosis through telepathy.

The next step was the setting up of a security operation. It was vitally important that the dowsers on the programme should be unaware of the design of the test. Clearly they would have to search for something already located or there would be no way to assess their success rate. The idea of specially buried targets had already been dismissed, so a search was begun for existing subterranean installations. Pipes, cables and railway tunnels, although hidden, had to be rejected as being too well-mapped. The idea of natural underground tunnels offered a solution to the problem.

It was decided that the dowsers should plot a subterranean cave system and, as an added incentive, also seek human targets within the cave system. As long as the television surface team were themselves kept unaware of the target team's whereabouts, but could locate them positively later, the idea seemed promising.

Below Pat Lucas, one of the dowsers at Priddy, discovered her ability to divine water when she tried dowsing for a new supply on the family farm and found it.

Right, top and centre Bill Lewis at work with his pendulum. A retired engineer who has become much in demand for map and medical dowsing, he came closest to locating the position of the cavers at Priddy.

Dowsers often look for missing people but, more often than not, their targets are dead. Looking for someone alive should be more rewarding, it was thought. Dowsers tend to be practical people and they respond to practical challenges. Scientific tests involving tedious and repetitious tasks offer no practical encouragement to them and only too often they become bored; their results suffer accordingly. In this test, it was hoped to motivate the dowsers by setting a useful goal based on the fact that hardly a summer goes by without a lost pot-holer necessitating

Right local children gather round John Williamson for a demonstration of dowsing. Williamson has a professional interest in dowsing: he manufactures divining equipment.

difficult underground searches. If this test worked, it was argued, perhaps the dowser's art could be harnessed to help avert human tragedy in the future.

Where to make the test? The limestone of the Mendip Hills in Somerset is riddled with cave systems. Water courses have carved a honeycomb of tunnels, which caving clubs have explored and charted. A local rhyme gave another lead:

If thunder clouds be in the sky
'Tis best go down a cave that's dry
An' them as goes down Swildon's Pot
'll all get stuck as like as not.

This warned of the dangerous flash floods that follow rain in the Mendips – indeed the cavers' lives would be placed at risk if the weather changed. But Swildon's Hole in the village of Priddy was deemed perfect and the proposed experiment had gained a secret code-name: the Priddy Project.

Priddy stands on the very top of the Mendip Hills. Its few trees and farm buildings huddle round a pub and a church boasting a graveyard so stony that they have to blast the rock when burying their dead. At the time of the Black Death the village saw unexpected trade when the plague drove the sheep fair from Wells to isolated Priddy. Since then the only unexpected trade has been brought by the cavers, and Swildon's Hole is the star attraction. It became known in 1901 when digging first revealed its remarkable passages and chambers. Subsequent exploration has exposed many miles of the cave, doubling and redoubling its way beneath the village. New passages are constantly being added to the plans, which needed massive revision following a terrible flood that roared through the cave in 1968.

The entrance is tiny and masked by an old ash tree. Surface clues to the caves beneath are misleading: it might be guessed that the passageways follow the line of the valley

bottom but they do not; they zigzag oddly at right angles to the valley. The dowsers would get no help from surface clues.

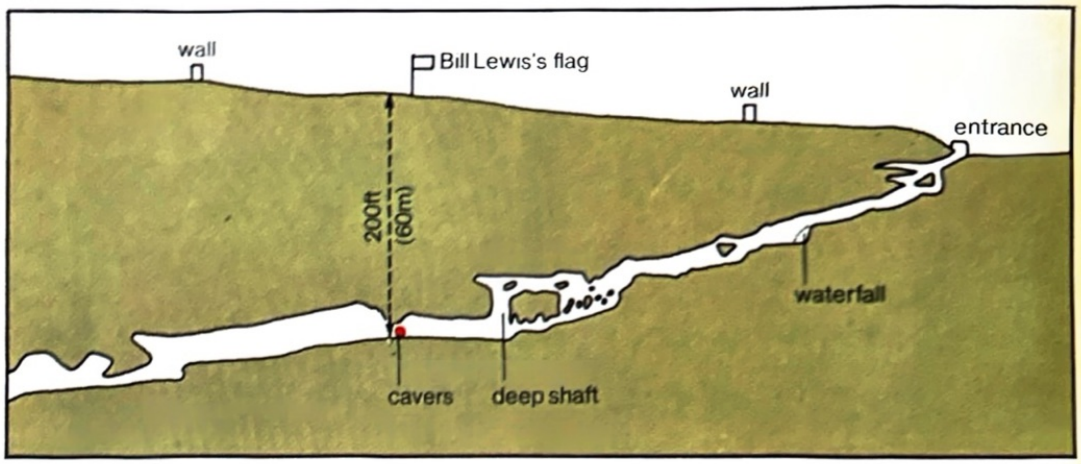
Hugh Pearson and Brian Prewer, experienced cavers, had the task of choosing a system for plotting the cavers' location once underground. They rejected seismic meters and radio probes before choosing equipment exploiting magnetic induction. The cavers were to carry wire into the cave, lay it in a coil, and then pass an electric current through it. The overground team could detect its field on the surface because a current would be generated in a surface coil by electrical induction. By this means the surface team could establish when they were directly over the underground coil. Such a system had been well-tried, being used to check the accuracy of cave surveys. It suited

Above: Donald Curry dowsing with a forked twig. He participated at Priddy as a representative of the British Society of Dowsers. All the volunteers did well in plotting the passages of Swildon's Hole, though none had tried dowsing for caves before. They even responded to an unexpected sharp bend in one passageway of which there is no sign on the surface

had accidentally discovered her skill while looking for drains.

Early one September morning a minibus collected the dowsers from the railway station at Bristol. They had no idea where they were to work, nor, indeed, what they were to seek. They were taken by a circuitous and misleading route to Priddy village. Conditions in Swildon's Hole were good with only a little water running through the passages. The cavers would first go along a sloping gallery 100 feet (30 metres) in length. Then they would drop 12 feet (3.5 metres) through an awkward waterfall. Beyond them lay a tight squeeze before a difficult descent down a 40-foot (12-metre) shaft. A further 100 feet (30 metres) from the foot of the drop was to be their resting place, 200 feet (60 metres) below ground. The support group, who had carried in the equipment, and the target cavers quietly retraced their steps and cleared the area before the dowsers were driven into Manor Farm. Only then were the dowsers told they would be divining for a cave or caves in which some cavers would be hidden.

The field chosen for the project was almost 6 acres (2.5 hectares) in area and bounded by stone walls and a wood. The field dipped and turned but gave no clue of what lay below. The dowsers asked to meet



Above: the route the cavers took and their final position. The flag is Bill Lewis's marker; this proved to be about 18 feet (5.5 metres) away from the human target, as determined by the signalling equipment used by the location team on the surface. Later, however, it was realised that the signal was imprecise – which could considerably reduce Bill Lewis's error

the purpose exactly: only the cavers would know where they were hiding, and they would have no personal communication with the surface. This was the security needed: nobody on the television team could inadvertently give the dowsers any clues.

There were still doubts as to whether dowsing would serve to find caves, but it would give things away to ask the dowsers outright at this planning stage. Pat Lucas and Bill Lewis had offered to participate as two of the five required volunteers. Donald Curry agreed to represent the British Society of Dowsers and John Williamson represented the makers of dowsing equipment. Williamson offered to bring a whole range of wands, rods and pendulums from his company in Hastings. The fifth dowser was Betty Risden from Rode in Somerset, who, like Pat Lucas, the cavers, who were ready to re-enter the cave, before starting their search and this was agreed. None of them had tried cave dowsing before and they all started on an equal footing. Each of the five had an assistant who was to drive flags into the ground wherever a cave was sensed below. Soon the field was full of crisscrossing dowsers, hazel wands, wire rods and pendulums. After an hour they were asked to locate the cavers.

One by one they finished, and were unanimous in stating that it was easier to locate humans than to find the hidden passageways. Last to decide was Bill Lewis. Exactly what he and his fellow dowsers had recorded remained to be seen. They left the field as the survey team arrived.

Overhead a helicopter conducted an aerial survey of the field and the clusters of flags.

Above: the survey team in the process of plotting the position of the cavers. They did this by means of an aerial that detected electrical currents in the equipment below ground

On the ground careful measurements were taken. To the dowsers' delight, their flags corresponded exactly to the known passageways of Swildon's Hole. They had closely followed the general features of the cave and they had all responded to an unexpected sharp bend to the north-west, though no surface feature indicated this change of route. There was one unexplained cluster of flags in the south-west corner of the field, which had to be recorded as a 'miss'. William Stanton, the author of *The complete caves of Mendip*, an eminent caver himself and the supervisor of the survey team, maintained that there were no extensions of Swildon's Hole in that area. The dowsers shrugged, unconvinced. Stanton also pointed out that their plotting of passageways beyond the point reached by the cavers was rather vague.

Below ground it was time for the hidden cavers to switch on the power and energise their coil of wire. The surface team quickly detected the weak magnetic field and, wielding a huge circular aerial, began to move over the field. Knowing the signal to be strongest directly over the target, they could mark out lines that converged over it. The dowsers were anxious as they watched the final readings being made and the final pegs being driven in.

A disappointed dowser

Just six paces away from the surveyors' ranging pole fluttered a small flag: Bill Lewis's. He had approached within 18 feet (5.5 metres) of his hidden human target. 'Not very good,' he sighed, 'I'd hoped to get nearer to it than that.' The other dowsers commiserated with Lewis. Although all their flags ringed the cavers, his was the closest and they sensed his bitter disappointment. It was not until the results were analysed later that it was realised his disappointment was largely misplaced. The odds against the dowsers hitting upon the target by chance were 250,000 to.one: 6 acres (2.5 hectares) is about 250,000 square feet (24,000 square metres). Lewis's 18 feet (5.5 metres) from the target shortened the odds considerably. Any flag placed within this distance of the target would lie within a circle having an area of 1000 square feet (93 square metres). The odds against this happening by chance are 250 to one.

The location team explained that their electromagnetic system required the underground coil to be absolutely level, but the passage floor had been very uneven and the coil had to be supported on rocks. Despite the water, mud and darkness, they had conscientiously used spirit levels to get the best result. Nevertheless, the tiniest error on the cave floor would be considerably amplified by the signal's 200-foot (60-metre) journey to the surface. Lewis's 18-foot (5.5-metre) 'error' represented only a 5 drift from the vertical. Could the horizontal coil have been a few degrees out of alignment? The makers of the equipment advise users to allow a little latitude in difficult situations by adding or subtracting 10 per cent of the vertical height to the conclusions of the surface coil: 10 per cent of 200 feet (60 metres) easily includes Lewis's 18-foot (5.5-metre) margin – so Lewis need not have been too disappointed.

Cautiously the survey team verified their findings by taking further measurements on the cave plans; they could not find anything at fault. Even the sceptical Stanton was forced to admit that three out of the five 'human target' flags marked positions where the cavers had paused at one time or another. As for the flags in the south-west corner, Stanton was adamant that there were no known extensions to Swildon's Hole in that area, thought to be solid rock.

Twice since then, however, in 1975 and 1977, digging and exploration have taken place at Swildon's Hole. Other survey methods have predicted a new cavern in precisely the area selected by the dowsers. This new digging has been tantalisingly inconclusive – but if cavers do break through into a new chamber there, the dowsers who took part in the Priddy Project will show no surprise.

Below: a helicopter conducts an aerial survey of the markers positioned by the dowsers in the field above the caves

Symbols in the sky

Millions of people look to the stars to guide them through their daily existence. Where did the signs of the zodiac come from, what do they mean and do they have the power to influence character and predict the future?

Secrets of the zodiac

The images and symbols that represent the signs of the zodiac have evolved over many centuries and draw on ancient traditions – some of them secret. A study of these symbols begins with the history of the graphic and pictorial forms of Aries, Taurus and Gemini

ONE OF THE MOST FASCINATING aspects of astrology is the story of the origin and evolution of the images and symbols of the 12 zodiacal signs. The images are the pictorial forms of animals, human beings and objects, loosely related to the constellations of the zodiac, while the symbols – sometimes also called sigils – are the 'shorthand' graphic forms representing the signs.

Most of the images for the signs of the zodiac have changed little since the very beginnings of astrology in the first millennium BC. The symbols, on the other hand, have changed greatly. All these changes reflect extremely interesting alterations in the secret teachings and traditions that have been associated at various times with the zodiacal signs. Major changes took place when the zodiac was reinterpreted in the light of Christianity, and again when it was related to developments in such arcane subjects as alchemy.

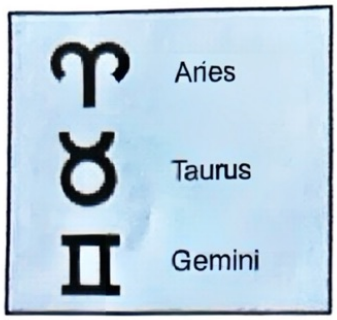
We shall consider all 12 of the signs, beginning with Aries, Taurus and Gemini. Each of these three images is much as it was when the Babylonians and Egyptians first drew their versions of the zodiac. In the famous zodiac in the temple in the Egyptian city of Dandara, Aries was represented as a ram. It survived in that form in the medieval zodiac – for example, in the lovely zodiac on the north door of the west front of Chartres

Cathedral in France. The symbol for Aries has changed a great deal, however.

Taurus was represented as a bull in the earliest of Babylonian and Egyptian zodiacs. The weight of the bull's body and its sexual power linked naturally with the qualities of this second zodiacal sign, which is traditionally the sign of the slow and ponderous but sexually active.

Gemini was originally represented by the image of two youths or men. In the Roman zodiac, which was influenced by Egyptian and Greek astrology, they were identified with the twin sons of Leda: Castor, who was mortal, and Pollux, who was immortal.

However, in the early Middle Ages the



Above: the graphic symbols representing the first three signs of the zodiac

Right: a ram has been the image for Aries since Babylonian times. This example is from the medieval zodiac at Chartres Cathedral, France

Previous page (top): in this 14th-century astrological drawing Aries (the ram) sits on the head, Taurus (the bull) on the neck and Gemini (the twins) on the upper arms. Each part of the body was traditionally associated with a sign of the zodiac

Previous page (bottom): the zodiac carved on the north door of the west front of Chartres Cathedral in France

couple were more and more frequently depicted as being of opposite sexes, as in the 13th-century zodiac in the floor of San Miniato al Monte in Florence, Italy. This change in symbolism reflected changes in the relationship between men and women, and these beginnings of the emancipation of women were expressed in the romance literature of chivalry at this time. The zodiacal images marked on the material plane these developments on the spiritual plane.

Medieval representations of the Gemini twins varied. On the south door of the west front of Chartres Cathedral (left) they are depicted as male figures standing behind a large shield, suggesting a connection with the military order of the Knights Templar. On the façade of Amiens Cathedral (right) Gemini is represented by the figures of a man and a woman holding hands, expressive of spiritual love between the sexes, while in a 16th-century woodcut illustration of the planet Mercury (above right) the Gemini couple are shown as physical lovers

Inevitably, this male-female symbolism in the 'new' Gemini was taken to carnal extremes, so that at times during the 15th and 16th centuries Gemini is represented in the form of a pair of lovers, sometimes even engaged in sexual congress. An example may be seen in a popular woodcut illustration from a shepherd's calendar of the early 16th century, which shows a personification of Mercury, with the two zodiacal signs over which he rules – Virgo and Gemini. In marked contrast to this is the tender image of Gemini in the quatrefoil on the façade of Amiens Cathedral in France, an expression of a gentle and spiritualised love between the sexes.

Behind the outer images of the zodiacal signs there is an abundance of secret and esoteric meanings, often used by alchemists, artists, poets and builders. In the esoteric tradition Aries represents the fire of the spirit. Taurus represents earthiness and fecundity, growth and incarnation. Gemini represents communication and expression.

Without a knowledge of astrological symbolism it would be difficult to understand the meaning of many alchemical texts and pictures. An alchemical drawing from the 17th-century work *Mirror of truth* is an example. In it a man holds a flaming brand in his right hand, the flames issuing from a symbol like that used for Aries. The flames are burning a church.

To understand the picture, one needs to know that in the esoteric tradition Aries is the sign of spirit and that it has two ways of working in the world: it may be destructive or creative. The church here is a symbol for the spirit, and the flames represent the destructive aspect of Aries.

In the other hand, the man holds an image

Above right: a drawing from the 17th-century work *Mirror of truth* depicts both the Aries symbol (part of the burning brand in the man's hand on the left) and the pictorial image (the ram, top right) to suggest the destructive and creative aspects of Aries

of the world, surmounted by a cross. Above, an arrow leading from a celestial ram, the image of Aries, points towards the cross, to show that the proper channel for the Aries impulse is towards a beneficial relationship with the earth below. Spirit is constantly seeking to enrich and fructify the earth.

Symbolism of Aries

A more complex example of the use of Aries as a symbol of spirit may be seen in the epic poem *The divine comedy*, composed in the early 14th century by the Italian poet Dante. In the poem Dante imagines himself guided through hell, purgatory and heaven. Purgatory is a mountain approached through gates. On the cornice, Dante sees carved images of sinners who fell because of their pride. He associates the climb up the mountain with the steep climb up the steps to the church of San Miniato al Monte, which overlooks Florence, Dante's birthplace. At this point an angel appears and removes from his forehead the sin of pride.

The right understanding of this part of the poem requires an understanding of the nature of Aries. According to medieval astrologers, this first sign of the zodiac had rule over the city of Florence and also over the human head. Thus the very mention of Florence and of the forehead evokes Aries. More importantly, the sin characteristic of fiery Aries is that of pride.

Aries rules the beginnings of things, including entry into the spiritual realms. It is therefore an excellent association for the beginning of the long climb up Mount Purgatory, where the souls of the dead are spiritualised by the purging of their darker elements.

Dante's allusion to San Miniato was more than a chance reference: this was his favourite church, and he must have been aware of much of the significance of the zodiac inlaid in the floor of the nave.

Aries is a fire sign, charged with exuberant spiritual energy. Taurus is the heavy earth sign, concerned with making a fecund place where growth may take place. Aries and Taurus work together, for the fire sign sends down sparks of energy that vitalise the sluggish earth element. But they cannot complete each other: from the meeting of the light of Aries with the darkness of Taurus a third element is born, which is Gemini. Gemini is the first of the 'human' signs in the zodiac. It is also the first sign that belongs fully to the Earth – there is something unearthly about Aries and Taurus. This idea is expressed in one of the most splendid zodiacs in the West, on one of the portals of the abbey church at Vézelay, France. The two images of Aries and Taurus have been given a very special treatment here: there is a complete break with tradition, for each is represented as part animal, part fish. They are reminiscent of the image of Capricorn that was already standard in the Middle Ages. This curious deviation from the medieval norm may be intended to indicate that both of these signs are not deeply related to the tangible world, but are archetypes, or Platonic forms: they are linked to the world of ideas, spiritual forces that are seeking to find a material expression, yet cannot touch the material world. It is significant that, by contrast, the pair of Gemini figures at Vézelay are embracing, standing on the Earth against a background of stars.

A fine example of the symbolism associated with Taurus has been revealed in

the small village of Gropina, near Arezzo in north-eastern Italy. A pulpit in the church there bears some extraordinary symbols. On the lectern three figures are engraved: an eagle is above a human being, who in turn is above a lion. These symbolise three of the four Evangelists: the eagle symbolises St John; the human figure, carrying a book, is St Matthew; the lion is St Mark.

The symbol of the fourth Evangelist, St Luke, is a bull. If we seek to find the reason for its absence from the Gropina lectern, we must grasp something of the esoteric teaching concerned with the Christian view of zodiacal lore.

Taurus is associated with the throat and especially with the larynx and speech. Indeed it is still maintained in astrological circles that a person in whom Taurus is well-emphasised will have a beautiful voice. Because of this ancient association the early Christian symbolism adopted Taurus as one of the symbols for Christ, the Word or Logos. The association was twofold: the Logos was linked with speech, ruled over by Taurus; while the sacrifice of the crucifixion was linked with the idea of the sacrificial bull – one of the commonest sacrificial offerings in Greek and Roman times.

Applying this to the lectern at Gropina, we see that the fourth symbol appears when the priest mounts the pulpit, speaking the words of God and symbolising Christ.

A detail of the carving of the pulpit expresses most carefully the fact that this zodiacal symbolism is quite intentional. On the capital of the central support is a narrow frieze of triangular shapes, which perhaps are a reference to the Trinity. One of the 10 triangles differs from the rest – it is an image of a bull's head. This is a sure indication that the bull 'missing' from the sequence above it is actually a reference to a secret tradition, linking Christ with the bull.

The 'secret' associations of Taurus extend beyond the realm of religious art. The modern symbol for Taurus was not used in medieval times; it appears to have been taken from an almost lost Greek tradition of astrology and was probably brought back into use in the West by the thinkers of Chartres, who in the 13th and 14th centuries spread many secret ideas in Europe. When the 16th-century German occultist Agrippa gave an account of this symbol he had no hesitation in insisting that it was based on a drawing of a bull's head. But he may have been hiding a much deeper level of symbolism. The drawing might with equal reason be seen as a representation of the Earth with a receptive crescent above. This crescent cradles the spiritual forces that flow into the Earth as a result of the sacrifice made by the Logos, Christ.

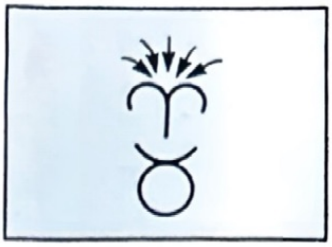
By such reasoning, the relatively modern symbol for Aries makes good sense when placed over the symbol for Taurus, for it represents the idea of spiritual forces being funnelled into the crescent-shaped receptacle of Taurus. Each time we speak we gather ideas from our spiritual understanding and pour them into the larynx, where words are born. This association of Aries and Taurus denotes the descent of the spirit (Aries) into the womb of the Earth (Taurus).

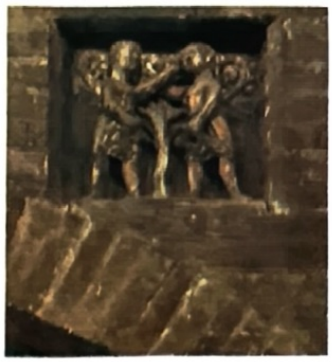
The hidden meaning of the symbol for Gemini can consequently be seen as a completion of the process.

Once the spirit has found words then communication is possible. What has been formulated in Aries and Taurus is communicated in Gemini, which rules the realm of communication. The symbol for Gemini, though reintroduced into Europe relatively recently, appears to derive from the ancient Greeks. The symbol consists of two vertical lines standing on a horizontal line, and

Left the bull (the image of both St Luke and Taurus) at first seems to be conspicuous by its absence on this pulpit in the church in Gropina in Italy, where the figures of an eagle, a human being and a lion represent three of the four Evangelists. But the bull's role as a symbol of the Word of God is fulfilled by the priest whenever he enters the pulpit to preach

Below and bottom: in the zodiac on the abbey church at Vézelay in France, Aries and Taurus are shown as part animal, part fish, symbolising their spiritual aspects





Top: the modern symbol for Aries placed above that of Taurus can be interpreted as expressing the channelling of spiritual forces into the earth

Above: the male Gemini figures on the walls of the baptistry at Parma in Italy are touching each other's head, while at the same time grasping the branch of a tree. This is thought to symbolise Gemini's ability to express what has been formulated by Aries and Taurus

♈ Aries
♉ Taurus
♊ Gemini
♋ Cancer
♌ Leo
♍ Virgo
♎ Libra
♏ Scorpio
♐ Sagittarius
♑ Capricorn
♒ Aquarius
♓ Pisces

air
water
fire
earth

cardinal
fixed
mutable

All human life is there

One important way of dividing the zodiacal signs is to group them into 'triplicities' (above left). Each consists of three signs, linked with one of the four traditional 'elements' – air, fire, earth or water. The 'airy' signs represent the intellectual qualities of reason, communication and refinement. They also represent humane feeling. The fire signs rule over headstrong natures and noble aims, energy, enthusiasm, ambition and emotion. When things go wrong such natures can, like fire, be dangerously destructive.

The watery signs rule natures that are emotional, sensitive, and easily impressed. They are artistic, sociable, and often psychically gifted. Those people ruled by the earth signs are practical, stolid, shrewd and diplomatic and inclined to be cautious and sceptical of the ideas of others.

The signs can also be classified into three groups of four, called 'quadruplicities' (above right). According to some modern astrologers, the four cardinal signs rule the conscious mind and have a dynamic influence, though somewhat lacking in direction. People governed by the fixed signs tend to have strong desires and are stubborn, though dependable. Their subconscious minds are strongly influenced by these signs. The mutable signs are involved with the 'superconscious' – the spiritual and psychic qualities of Man's higher nature.

surmounted by a second horizontal line. This could represent two people standing in close proximity; one grasps an idea from the spiritual realm and expresses it in such a way as to communicate a truth to the other – symbolised by the upper horizontal line.

Look once more at the image of a man and a woman in the carving of Gemini at Amiens. They are not merely holding hands: they are communicating, perhaps even conversing.

The image of Gemini high in the walls of the baptistry of the cathedral at Parma in northern Italy comprises two men, in the ancient tradition. Each touches the head of the other and at the same time grasps the branch of a tree. This is certainly an attempt to symbolise the bringing down of that which belongs to the head (the thought represented by Aries) to the Earth (the rooted trees).

The zodiacal image for Gemini at Chartres Cathedral is swathed in mystery. The zodiacal imagery around the north door of the west front is not complete. There are only 10 signs on this arch: Gemini and Pisces are missing. They were placed on the south door of the west front. Historians have given several explanations for this curious transposition of images. The symbolism of the Gemini figures may enable us to pierce through some of the mystery.

These two figures are both male, in the classic tradition. But in this image they are both standing behind a huge shield. Each has one arm across the chest, in a fashion reminiscent of the arms folded in the form of a cross in the effigies on the tombs of knights. This posture is probably intended to link the cathedral to the order of the Knights Templar. There could otherwise be little reason for using the military symbol of the shield in this way, and for setting apart the figure that incorporated it as something especially important. One or two historians have indeed suggested that the vast amounts of money required for the design and construction of this cathedral were made available from the resources of the Knights Templar, and that much of its secret symbolism is linked to this strange and powerful order.

The crab, the lion and the virgin

The signs of the zodiac encompass a fine mesh of esoteric symbolism reflecting Man's material and spiritual nature. The ancient and occult meanings of Cancer, Leo and Virgo are largely unused today

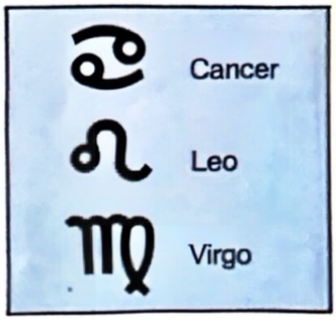
Above: this 15th-century fresco painted in Ferrara clearly shows Cancer as a lobster-like crayfish. This medieval image has become a crab in modern times

THE FOURTH SIGN OF THE ZODIAC, Cancer, has the image of a crab, indicating the watery nature of this, the first of the water signs. At deeper levels of symbolism Cancer is linked with the uterine waters, and hence with the womb, birth and motherhood. This secret symbolism was applied to many different purposes: for example, in horoscopes that were cast to symbolise the creation of the world – the so-called *rhema mundi* – Cancer was usually in the ascendant (that is, rising). Since astrologers regard the ascendant as one of the most significant points in a horoscope, Cancer was thus one of the most important elements in the chart associated with the birth of all things.

Cancer's connection with birth was further rooted in an ancient view of the spiritual nature of the world that is now almost entirely foreign to us. It was believed that surrounding the Earth were the spheres of heaven, a series of concentric shells. Each sphere was supposed to be inhabited by spiritual beings and to be 'ruled' by a planet. Each planet was associated with some member of the spiritual hierarchy, more popularly called an angel, an archangel, and so on.

It was further believed that when a spirit came to dwell in a human body at its birth, it passed through each of these spheres, drinking in, as it were, the spiritual forces relating to the planets. The last stage of this descent was through the sphere of the Moon, which was under the guidance of the archangel Gabriel. The Moon rules Cancer, which is why the sign is so intimately connected with prenatal experience.

A remnant of this idea may be seen in one of the remarkable zodiacal images still preserved in the baptistry of Parma Cathedral, dating from the 13th century. Here Cancer is represented by a crayfish – as in some other medieval zodiacs – and the tail of the crayfish is overlaid on the halo of the archangel Gabriel. This symbolism is especially important in a baptistry, where, through the act of baptism, a new-born child is linked with the spiritual world. This important connection between Gabriel, birth and the soul's prenatal experiences in the Moon's sphere almost certainly explains why Gabriel was appointed to bring to Mary the news of the impending birth of Jesus.



Above: the modern astrological symbols for the signs of Cancer, Leo and Virgo

Left: this decoration in the baptistry of Parma Cathedral in Italy shows the tail of the Cancerian crayfish overlying the halo of the archangel Gabriel. Cancer is profoundly connected with birth, and Gabriel is traditionally believed to have been the messenger who told Mary she had been chosen to bear Jesus

The sign of Cancer is, therefore, linked to both the physical and the spiritual experience of birth. By extension it is also linked with the idea of motherhood. The house of Cancer is still called by astrologers the 'house of the mother' and is said to rule over all domestic matters.

The symbol most frequently used for Cancer in medieval times was not unlike the modern one, but it consisted of two vertical strokes side by side, one with a small circle at its foot, the other with a circle at its head. It may be seen as representing an important idea relating to the innermost nature of the sign. The symbol suggests the idea of upward and downward movement. It is a graphic symbol of vacillation. People born under the sign are noted for their changeability, and the image of the crab is highly pertinent to this aspect of Cancerians, who are liable to dart first to one side, then to the other.

Astrological symbols are often found as decorations on medieval churches. Many of them have undergone great change over the years but Leo, the lion (above, left), has remained the same

A grasping nature

The changeability of Cancerians is largely restricted to their emotional life. By contrast they keep a pincer-like grip on their homes, material possessions and children. This curious stability in a personality that is so vacillating in other respects is associated with the Cancerian tendency to grasp at the past. Childhood is the realm of the Cancerian, for he or she does not easily forget the spiritual realm of the lunar sphere, which immediately preceded earthly life. Gabriel is never far from the Cancerian – as the symbolism of the carving at Parma suggests.

It is possible that the medieval symbol, with its insistence on the contrast of upward and downward movement, also refers to an idea very important in Arabic astrology, which so strongly influenced medieval European thought. In this tradition of astrology, it was insisted that the fixed stars (as opposed to the planets, or 'wandering stars') had a most powerful influence on those zodiacal signs in whose corresponding constellations the stars were located.

Nearly half the 30° arc of Cancer is densely populated by stars, while in the other half they are sparse. Some astrologers therefore claim that it is not sufficient to consider whether, say, the Moon is in Cancer in a natal chart – it is also necessary to consider the Moon's exact degree, or position within the sign. For if there is a star nearby, then a powerful influence for good or evil will enter into the life of that person.

So according to Arabic astrologers there are basically two kinds of Cancerian: those who are linked with a fixed star and those who are on the Earth without such a connection. We can view the medieval symbol of Cancer as a kind of drawing of this important duality, for one of its circles is directed upwards, towards the stars, while the other is directed downwards, towards the Earth. The insight that this symbolises has been almost entirely lost in modern astrology.

Below: Christ in glory over a doorway in Chartres Cathedral, surrounded by the symbols for the four Evangelists; Mark is Leo, Matthew a winged human, John is Scorpio (seen here in its alternative form as an eagle) and Luke is Taurus

Unlike Cancer, Leo has been given the same image – that of a lion – from the very earliest times. Leo is one of the four 'fixed' signs (the other three being Taurus, Scorpio and Aquarius). They are indeed associated with qualities of 'fixity' in the personality: with stubbornness and strength of desire. When in the early centuries of Christianity the ancient symbolism of the zodiac was adapted to the requirements of the new religion, the four fixed signs were adopted to represent the four Evangelists. Taurus represented Luke, Scorpio represented John, Aquarius represented Matthew and Leo represented Mark.

This important symbolism is used in many cathedrals to express teachings and traditions concerning the Sun – a symbol of Christ. Since Leo is ruled by the Sun, the lion is frequently so placed in zodiacs in and on churches that it is the first of the four fixed

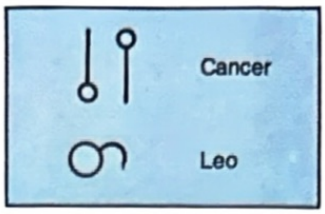
Right: the bull, symbol of St Luke, appears to be the first of the figures on the façade of Orvieto Cathedral in Italy to receive the rays of the rising Sun. However, the bull is looking away from the light at the figure of the Virgin and Child. In fact it is the lion (above) – symbol of Christ the King – that is bathed in the first light each day

signs to receive sunlight each day. In Chartres Cathedral, for example, the four symbols of the Evangelists are ranged around Christ in glory. The lion is the first figure to be lit up by the Sun each day.

Sometimes the symbolism is more profound than this. In Orvieto, in central Italy, the four Evangelist symbols are ranged across the façade of the cathedral; the bull of St Luke is at the southern end, and so receives the light of the Sun first. However, it has its back to the Sun, for its eyes are directed towards the Virgin and Child in the middle of the four figures. It is the lion that first receives the sunlight on its face. This is in perfect accord with the tradition that links Christ (the lion) with the Sun, in much the same way as Gabriel is linked with the Moon.

It has been suggested that the symbol for Leo, which is derived from ancient Greek horoscopes, is a representation of the lion's tail. But it is more likely that it is designed to reflect upon the innermost nature of the Leonine personality. The small circle on the left of the bell-shaped part of the symbol may be visualised as the heart, the 'Sun' that Leo rules at the centre of the human organism.

Below: the medieval symbols for Cancer and Leo. The vertical strokes of Cancer may well symbolise typical Cancerian vacillation, while the circle of Leo seems to represent the human heart, which Leo rules, and the tail may indicate Leo's creative energies

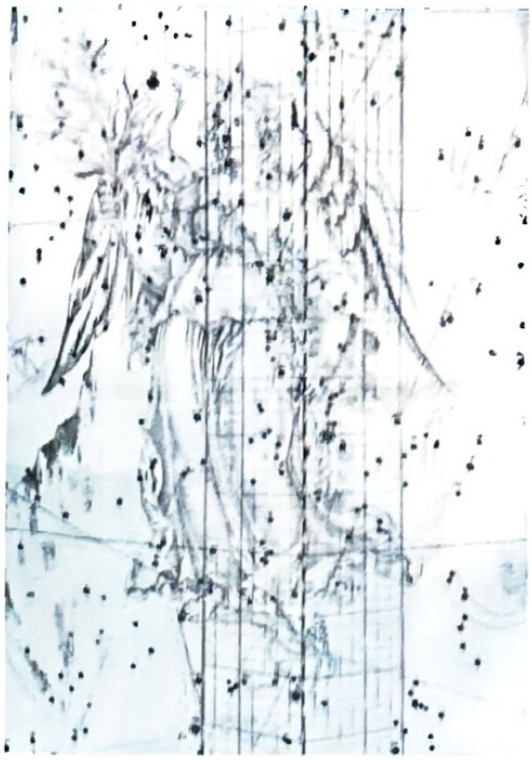


Between Sun and Moon

Mankind is very frequently shown in medieval symbolism between the powers of the Sun and the Moon. One of the most remarkable of such images, making use of extremely subtle symbolism, is on a carved capital in the cathedral of St Pierre, in Geneva, Switzerland. Melchisedec, the Jewish high priest, holds in his right hand the Host (the bread transformed into the body of Christ) and in his left hand the chalice bearing the blood of Christ. His name, carved on the column above, has been slightly changed in form in order to express an astrological idea. The 'M' is carved as a symbol for Leo, and stands over the host. The final letter 'C', separated from the main body of the word, is drawn as a Moon symbol and stands over the chalice. This priest is a symbol of Everyman, who stands between the forces of the Sun and of the Moon. He is linked with the spiritual world through his own blood (the heart of Leo) and the blood of Christ (the liquid in the chalice).

The next sign of the zodiac, Virgo, is closely bound by Christian tradition to the Virgin Mary. The early Christian artists were quick to see the possibility of adapting the picture of a young woman in the starry realm as an image of the Virgin who gave birth to a child from the spiritual realm. Byzantine and Renaissance artists insisted on placing a star on the shoulder or head of the Virgin Mary – a practice that can be understood only in relation to the zodiacal Virgo. The brightest star of the constellation, alpha Virginis, has the traditional name Spica. This means 'ear of corn' and for this reason many images of Virgo show a young maiden

Right: this carving in the cathedral of St Pierre in Geneva, Switzerland, shows the Jewish high priest Melchisedec holding the body (in the form of the transubstantiated Host) and blood of Christ. But it is the subtle carving of the 'M' and 'C' of his name that is of particular significance. The 'M' has become the symbol for Leo (the Sun) and the 'C' is a Moon symbol. Thus the priest is representing humanity balanced between the forces of the Sun and Moon



Left the brightest star of the constellation of Virgo has the Latin name Spica, which means 'ear of corn' a fitting symbol for the Christian concept of Christ as bread spiritual food with which to feed the world Many medieval images of the Virgin Mary show her with an ear of corn or even wearing a dress patterned with many ears of corn (right), symbolising Christ and also referring to Spica

holding a corn stalk in her hands. This imagery was well-suited to the Christian symbolists: they saw the corn as an image of Christ, who was to be the 'bread' that fed the world. Just as the Virgo of the constellations held an ear of corn, so the Virgin of the artists held the child Jesus. Some pictures of the Virgin Mary actually portray her with the ear of corn, or with many ears of corn covering her dress.

Another strain of Christian symbolism is found in pictures of the Virgin holding a distaff. This is a reference to one of the gospels of the Apocrypha, which relates how Mary was spinning wool when the archangel Gabriel came to her with the news of her coming child. When the inner meanings of the ear of corn and of the distaff were lost, painters and sculptors showed Mary holding a flower. No doubt this was intended to represent the flowering of youthful virginity.

Above the image of the Virgin/Virgo on the frontal of Amiens Cathedral, France, shows her as mediator for mankind, standing between the tree of knowledge, by which men fell, and the 'tree' – the cross – by which mankind was redeemed

Below. Virgo and Sagittarius are found in juxtaposition over this arch in Chartres Cathedral; the church is dedicated to the Virgin, and the archer represents the Knights Templar, who financed its building

The figure of Virgo on Amiens Cathedral is holding what may be corn. Its identity is not of the greatest importance, however, for the deepest symbolism in this carving is to be found in the fact that the maiden stands between two trees – the trees by which mankind fell and was redeemed. In one tree dwells the serpent who tempted Eve, while the other tree represents the 'tree' – the cross – on which Jesus died. This Virgo is an image of Mary, the mother of Christ, standing as an earthly mediator between the two trees.

In the cathedral at Chartres the arrangement of the zodiacal figures is unusually rich in symbolism. However, there is a special significance to the positioning of the image of Virgo. The figure is made prominent by being placed at the very top of the pointed arch, together with the archer Sagittarius, which is a military symbol. The cathedral is dedicated to the Virgin Mary and, according to esoteric tradition, was financed by the military order of the Knights Templar. Thus this curious juxtaposition of Virgo and Sagittarius, which are widely separated in the zodiac, summarises the founding and dedication of the cathedral.

The symbol for Virgo is often explained as being derived from the letters MV, for Maria Virgo. Another suggestion is that it is derived from a picture of three ears of corn in an upright position. But its true derivation can be understood only after we have dealt with the derivation of the symbolism of Scorpio.

Scales, serpents and centaurs

During their development the figures and symbols representing zodiacal signs have sometimes shown their occult meanings clearly, and at others have concealed them. The history of the images associated with Libra, Scorpio and Sagittarius is particularly tangled

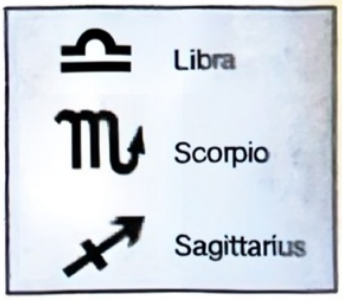
IN MOST RESPECTS the image of Libra, seventh of the signs of the zodiac, has changed little over the centuries, though there have been regional variations in some details. At Chartres Cathedral in France the 13th-century zodiac carved over one of the doors has been damaged, and the image of Libra is beyond recognition. On a column to the south of this 'astrological' door, however, there is a small image that shows a woman holding a pair of scales. The series of zodiacal figures ranged vertically on this single slender column is usually passed by, unnoticed by the casual observer, yet some of its images are quite out of the ordinary and worthy of close attention.

One of the most impressive medieval images of Libra is found among a set of zodiacal sculptures, now sadly depleted, carved by Benedetto Antelami, in the 12th century. The surviving figures are now in the baptistry in Parma. One shows a man – a rare choice for the image of Libra – holding disproportionately large scales, at the foot of a figure personifying the month corresponding to Libra (September–October in the modern calendar). The lack of proportion between the balance and the human figure may be a throwback to the early Egyptian image of Libra. This consisted of a pair of scales over which a small figure was placed in a circle. The circle is a kind of halo indicating that the figure within is an astral being, or god.

This image is related to the Egyptian *symbol* for Libra, which showed a disc above a bowl-like form. It is said to represent the setting Sun above the Earth. However, what is important in the symbol is the *space* between the Sun and the Earth – representing the air realm of Libra. It is the space that always exists between the male principle (the Sun) and the female (the Earth), which the impulse of Libra is forever trying to bridge.

This important idea of space (often symbolised as air in the esoteric tradition) is still contained implicitly in the modern symbol for Libra. Contrary to general belief, it is *not* derived from a pair of scales. The symbol functions like an equals sign between those for Virgo and for Scorpio. (In fact, the same sign is still used in mathematics to mean 'is approximately equal to'.) Libra symbolises the bridge that Virgo must cross to reach the Scorpio male. It is the space between the eternal Adam and the eternal Eve, between the feminine part of the human psyche (the anima) and the masculine part (the animus). In the zodiac Libra stands opposite to the selfish Aries, and in modern astrology the seventh house of the zodiac is often called 'the house of relationships'.

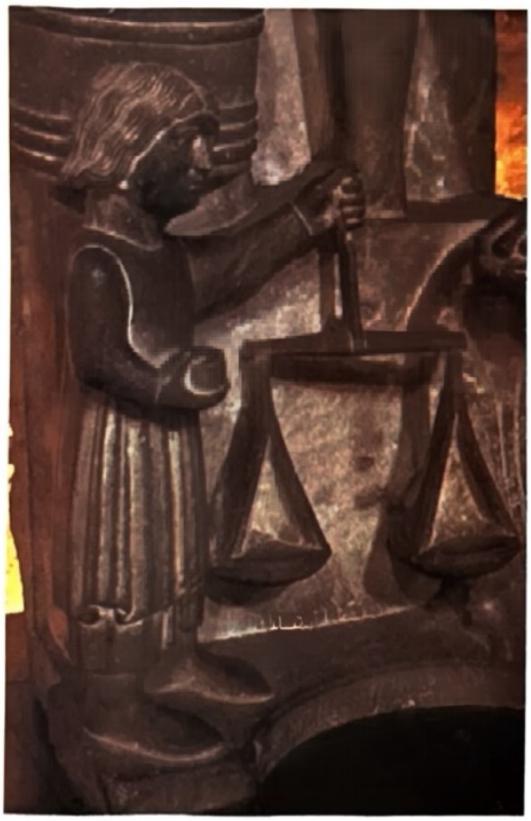
Because the triad of Virgo, Libra and Scorpio are so closely linked, astrologers have attempted to explain the curious forms of their symbols as expressing a threefold unity. It has been suggested, for example, that the terminal flourish on the symbol for Virgo was originally a representation of the female sexual organ, while the corresponding flourish on the symbol for Scorpio represented the male organ.



Top, a figure of Libra in Chartres Cathedral, France. The Egyptians depicted Libra as a pair of scales, in medieval Europe a human was shown holding them

Above, the symbols used in modern astrology for Libra, Scorpio and Sagittarius

But it has also been argued that the symbols for Virgo and Scorpio were derived from a single drawing of a serpent, having a head, many coils and a tail. This was the serpent tempter in the Garden of Eden, whose evil work led to the sense of separation that now exists between the two sexes. A symbolic account of the development of the sign asserts that the serpent was cut in two, and from its body were fashioned the bodies of the first man and woman, who until that

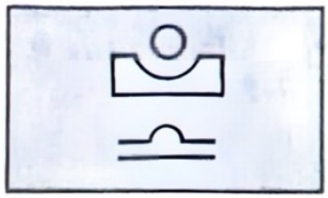


time had not known separation.

Significantly, the severed head part became the symbol for Virgo, who is usually characterised by clarity of thought, while the tail became one of the symbols for Scorpio, which is associated with passion.

Historically the modern symbol for Scorpio does indeed have a serpentine origin. In Egyptian times the symbol was derived from the pictograph, in demotic script, for a snake. By late Greek times it approximated to the modern symbol, though still clearly related to the snake-like form of its origin. The occultist Agrippa, who wrote during the early 16th century, claimed that the modern symbol represented the sting of a scorpion, but he was merely guessing; the original was certainly based on the image of a snake.

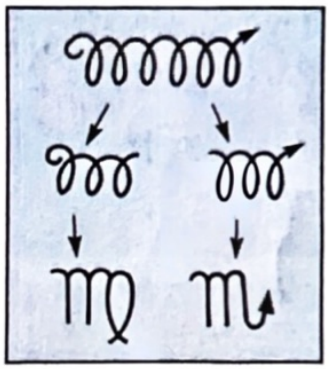
The image of Scorpio has had a chequered career, changing according to the current ideas of artists as to what a scorpion looked like. In areas where scorpions are plentiful, the images were fairly accurate; where they were known chiefly from travellers' tales, the images tended to be fanciful. The Egyptian zodiac at Dandara, for example, had a clear



Above: an Egyptian symbol for Libra, supposedly showing the Sun above the Earth, with its modern derivative. In each symbol the enclosed space denotes air, the realm of Libra

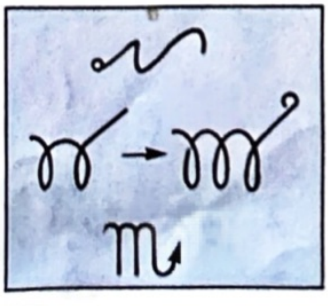
Left: a 12th-century male figure of Libra, carved by Benedetto Antelami

Below: one story has it that the symbols for Virgo and Scorpio arose when a snake-like form split – signifying the division between the sexes caused by the serpent in Eden



Right: the image of Scorpio from the abbey church at Vézelay, France – a brave attempt at depicting a creature the artist had apparently never seen

Below: the symbol for Scorpio developed from the symbol for a snake in Egyptian demotic script (top), through recognisably serpentine forms in late Greek times (centre), to the modern form (bottom)



scorpion figure. This strain of imagery persisted and found its way into, for example, the 13th-century zodiac at San Miniato al Monte, in Florence. In contrast to this, however, is the example at Vézelay, in France, which is almost comic: it reminds one more of a camel than a scorpion. A remarkable image of Scorpio from Chartres Cathedral has an almost demonic face, which expresses an important aspect of this sign.

In many ways Scorpio is the most difficult of the 12 signs to understand. A clue to its inner meaning is found in the fact that Scorpio is accorded rule over the sexual parts of the human being. The full significance of this can be grasped only when it is related to the medieval thinker's view of the world. The sexual parts were associated with hell, the dark forces, and the demonic in Man. This explains why the house of Scorpio is called the 'house of death'. Some modern astrologers make a further extension and call it the 'house of karma'; in Eastern traditions karma is the sum of a person's actions, good and bad, in one life, which influences his lot in the life following. An astrologer is usually able to tell something of a person's spiritual condition from the influence of this sign in his horoscope.

Strange duality

This connection with the darker forces accounts for the strange duality that astrologers associate with Scorpio. The true Scorpionic type appears always to be living under extremes of tension, as though caught between the forces of darkness and those of light. On the opposite side of the zodiac is Taurus, which, as previously explained, is linked with the Logos – the word of God expressed in the incarnation of Christ. The

Above: an image of Scorpio on the cathedral at Chartres has been given an almost demonic face

axis running from Scorpio to Taurus – which is, of course, present in all horoscopes – is a powerful one. The conflict between Scorpio, associated with hell, and Taurus, associated with Christ, dramatically represents the struggle between darkness and light taking place within all human beings.

The astrological relationship between the 'forces of light' of Taurus and the 'forces of darkness' of Scorpio is very ancient: it was established before Christianity, in the cult images of Mithraism – the ancient Persian religion that worships Mithras, god of goodness and light. One such image shows Mithras cutting the throat of a bull. The blood of the bull spills onto the earth, fertilising it, while on the earth itself a scorpion attacks the genitals of the bull.

This portrayal of the opposition between Scorpio and Taurus is rich in astrological symbolism: the creative blood streams downwards, while the dark Scorpionic forces reach upwards – as heaven and earth interpenetrate. The image reminds us, too, that Taurus rules over the throat and larynx, while Scorpio rules the sexual parts.

The outcome of the conflicts in which Scorpio is involved is either that the spirit is enlightened or that it is weakened and borne down by darkness. This is the principal reason why Scorpio has been accorded two images in the esoteric tradition. The victory of the forces of darkness is represented by the scorpion, a creature condemned to live in the desert, carrying a poison in its body. The victory of the forces of light, however, is represented by the image of an eagle. This is the image that survived in Christianity as a symbol of the redeemed nature. The Evangelist St John is linked with Scorpio, and is accordingly represented by the symbol of the eagle. In many Christian pictures and carvings the eagle accompanies the bull of St Luke (Taurus), the lion of St Mark (Leo) and the winged figure representing St Matthew (Aquarius).

Warfare of light and darkness

Since there is warfare between light and darkness within the Scorpionic nature, it is not surprising that the cathedral builders positioned the images associated with Scorpio to take advantage of the movement of the Sun, just as they did with the images of Leo. As we saw in an earlier chapter, Leo, which is ruled by the Sun, is often placed on the façade of a cathedral so that it is the first of the Evangelists' symbols to receive sunlight in the course of the day. Scorpio, connected with hell and the dark centre of the cosmos (according to the medieval view of the world), is correspondingly placed so that it is the last to receive the light. Notable examples are the groupings of figures in the cathedrals at Chartres and at Orvieto in Umbria, central Italy.

After the tortuous paths that we have had to follow to elucidate the symbolism of Scorpio, the symbolism of Sagittarius, the ninth sign of the zodiac, is relatively straightforward. From ancient times the image of Sagittarius has been a centaur about

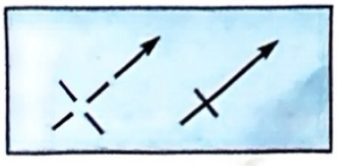
Above the eagle, an alternative symbol for Scorpio, is often used in early Christian art to represent St John the Evangelist

Above right Sagittarius represented as a centaur in the abbey church of Vézelay The combination of man and horse expresses the marked conflict of the higher and lower Sagittarian natures

Below left the sacrifice of a bull by the god Mithras. A scorpion attacks the bull's genitals, symbolising the opposition between Taurus (the forces of light) and Scorpio (the forces of darkness)

Right Sagittarius is shown as a satyr in this quatrefoil on Amiens Cathedral, France

Below the symbol for Sagittarius can be seen as an arrow lifting a cross-shaped burden – or as the Sagittarian's higher nature struggling to elevate his lower



to shoot an arrow from a bow. However, there are examples of Sagittarius being represented as a human being – for example, in a fine carving in the baptistry at Parma. Such a symbolism is curious, for an important aspect of the Sagittarian nature is represented by the more usual centaur figure, part-human, part-animal. It emphasises that those who are influenced by this sign are pulled downwards by their appetites. Sagittarians delight in good food, stimulating company and the pleasures of the flesh. But their lower nature is depicted as a horse because it can be tamed to serve the aspirations of the spirit.

In a quatrefoil on the cathedral at Amiens, northern France, the archer is represented not as a centaur but as a satyr-like figure, with hairy legs, a bushy tail and cloven feet – a clear reference to an earthy, even bestial, lower nature. This image, too, expresses the astrological view that the Sagittarian finds it difficult to master the demands of his body and to free himself from his somewhat possessive love of the physical realm.

This predicament is expressed in the symbol of Sagittarius, which can be traced back to early Greek horoscopes. It is more than a simple drawing of an arrow: it can be broken down into an arrow, the symbol of a spiritual impetus, lifting a burden represented by a cross at the arrow's tail. This burden is the Sagittarian's natural desire for sensual enjoyment and gratification. He is lifted by his spiritual impulse to rise above the delights of the flesh and to pay regard to higher things. A Sagittarian who is highly developed and has learned to put his earthier nature at the service of his higher self is one of the freest of beings, who fully deserves the epithet 'human'. An undeveloped Sagittarian, on the other hand, is caught up in the demands of the lower world and tends more and more to the animal state. The satyr at Amiens perhaps expresses this idea more poignantly than the standard image of the centaur: certainly the entire symbolism is lost in those occasional modern representations of Sagittarius that separate his two aspects and depict a rider on a horse.

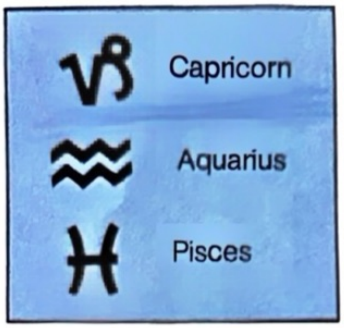
The goat, the angel and the fish

A fish representing Christ, and an angel representing St Matthew – these are what Pisces and Aquarius meant to medieval artists. This chapter analyses these signs, and the weirdest denizen of the zodiac – the fish-goat, Capricorn

IN MODERN TIMES CAPRICORN sometimes has the image of a goat. But the traditional image, and still the most usual one, is that of a goat-fish. In the very earliest days, in Babylonian symbolism, Capricorn was a horned goat with a mermaid-like tail. The Greek astrological tradition gave a twist to the tail. Early medieval astrological manuscripts showed Capricorn in a form that was closer to the Babylonian original, but later on in medieval times the astrological tradition took up the Greek image. It is this image that appears in all the major representations of the zodiac in the French and Italian cathedrals and churches.

The 13th-century Italian zodiac in San Miniato al Monte, in Florence, for example, shows such an image. At Chartres, in France, the figure of Capricorn that appears over the northern door in the west front looks like a goat at first glance; but a serpentine curved tail emerges from beneath its body.

The conjunction of a goat and a fish is by no means an historical oddity, for it is replete with inner meaning. The curious union reflects the Capricornian personality. The astrological tradition insists that the Capricornian seeks to live in the light of day: he is like a mountain goat, forever striving to climb upwards. He is an admirer of excellence and he is ambitious, seeking always to be at the head of his profession.



Above: the modern symbols for the last three signs of the zodiac

Left: the figure of Capricorn from the zodiac carved in the abbey church at Vézelay, France. The extraordinary image of the fish-goat is as old as Babylonian astrology

The fish-tail, however, represents the element of fear in the Capricornian's nature. It represents the shoal in which the individual merges and loses his separate identity. The Capricornian's ambitious upward urgings are partly due to his desire to separate himself from the herd, from what he instinctively sees as mediocrity. He is constantly being threatened with submersion in the waters that are the natural medium of the fish. To differentiate himself from this the Capricornian's goat element seeks for separation and distinction.

The image of Capricorn is a parable on the struggle taking place in the life of civilised nations. At his present stage of evolution Man is striving to break away from the herd instinct (the fish tail) in which he submerges his own identity and personal striving in the general demands of the tribe.

The consequence of this break with age-old patterns is a sense of alienation and isolation; loneliness is the price one must pay for being distinctive and exclusive. It is no accident that the zodiac is often depicted

with the house of Capricorn at the very top, looking down upon all the rest. The fundamental problem of the Capricornian nature is that of the isolation characteristic of his cold ruling planet, Saturn.

It is interesting that in modern times the goat-fish image has sometimes been replaced by a goat image. It is as though the unconscious urges that determine the growth and change of symbols are seeing only the outward side of the Capricornian – his ambition, concern with status, and so on. When the fish-tail is ignored the essential loneliness and fear of the Capricornian is ignored.

It is difficult to be precise about the time when the simple goat image began to appear, but the figure preserved in a superb English zodiacal schema on the FitzJames Arch at

Merton College in Oxford is certainly a very early example. It was carved in 1497 – surprisingly early, for at that time scarcely any astrologer would have considered Capricorn as anything other than a goat-fish.

The symbol for Capricorn is little more than a vestigial drawing of the goat-fish; the 'v' part of the symbol represents the curved body, the terminal flourish represents the twisted tail. Interestingly, this symbol developed at about the same time that the simple goat figure was making its appearance as an alternative image, as though it were considered necessary for the symbol at least to express something of the Capricornian duality.

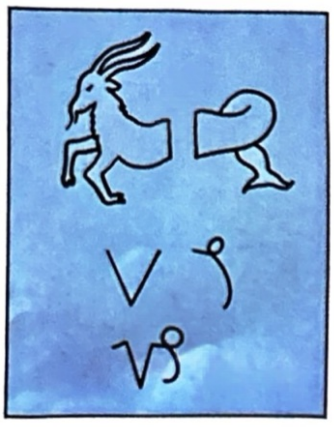
The next sign of the zodiac, Aquarius, is represented by the image of a man pouring water from a large jar. There is a modern

Above: Capricorn as a goat, carved in wood on the FitzJames Arch at Merton College, Oxford, and dating from 1497

Far left: the clock face on the magnificent 15th-century clock tower in St Mark's Square, Venice, carries familiar versions of the zodiac images

Left: this figure of Capricorn appears in a zodiacal arrangement at Chartres Cathedral, France. The coiled tail betrays the fact that this is no mere goat, but rather a fish-goat

Below: the symbol for Capricorn is a simplified version of the goat-fish



tendency, however, to make this figure a woman. The image appears originally to have been derived from the figure of the Nile god Hapi, who poured water from two jars. There was an even earlier Babylonian image of a star god who held a water pot but who also had the power to pour water from his own hands.

Angelic Aquarius

The Babylonian name for Aquarius may have meant either 'great star' or 'constellation of the great man'. This latter designation is interesting because when Aquarius was adapted as a Christian symbol in later times, its godlike yet human nature was preserved. When the four 'fixed' signs of the zodiac were adopted as symbols of the four Evangelists, Aquarius represented St Matthew. While he was the human symbol of the four, he nonetheless was depicted with wings, emphasising his angelic or otherwordly nature. The Christian figure holds a parchment scroll or a book, from which the spirit pours, in place of the water pot of the zodiacal figure.

With the passage of time the human element was emphasised at the expense of the godlike. While the constellation figure was usually represented as a winged man or woman, more popular imagery of the zodiac began to show Aquarius as a wingless human form, as though the ancient god had come down to Earth. The most impressive zodiacs in Europe present Aquarius without wings.

The twin zig-zag lines that symbolise Aquarius are generally regarded as a drawing of waves in water. Yet Aquarius, despite its name, is one of the air signs. Some modern astrologers claim that the drawing shows an

electric current but there is no historical foundation whatever for this claim.

There is little mystery about the symbol, for the zig-zag lines *are* derived from early medieval symbols that clearly represented the water flowing from the jar of Aquarius. The important element is the invisible one – the space between the two lines. In this we see the air that separates the two streams. It is shown as that which 'runs through the waters of life' – the cosmic air that permeates all living things. While Leo rules the heart and the blood, Aquarius rules the circulation. One of the functions of the circulation is to carry oxygen, itself derived from the air, to all parts of the body to nourish and purify them.

The earliest zodiacs incorporate the symbol of Pisces as a pair of fish swimming in opposite directions. However, in the Egyptian carving at Dandara, the two fish are pictured swimming in the same direction, their tails joined by a thread. It was the earlier of these two ancient images that was finally adopted by the medieval astronomers, so that all the standard zodiacs show two fish swimming in opposite directions with a connecting silver thread held firmly in their mouths.

Later interpretations of this figure suggest that the two represented the dual nature of Man: the spirit and the soul, visualised as pulling against each other. The spirit stays aloof from the physical realm of the earth and merely dips into it from time to time, therefore remaining free and unsullied by matter. The soul, on the other hand, is influenced by the life of desire, and even begins to be contaminated by the material world. The spirit aspires upwards and is free; the soul is pulled downwards by the earth. It is this opposition that is symbolised in the two fish. The cord that unites them is the 'silver cord', the link that unites spirit and soul during life but is sundered at death.

Above St Matthew, the Christian Aquarius, here shown on a Danish altar as an angelic figure carrying a book rather than an urn

Above right: a superb carving of Aquarius from the FitzJames Arch, Oxford

Below: the fish, facing opposite ways, are said to symbolise spirit and soul. This window is at Chartres

This level of interpretation misses out the physical realm altogether: the two fish swim in the waters of the spirit and the soul, and the Piscean temperament is seen as dwelling naturally in the spiritual realm, finding fulfilment in spiritual beauty – in art and poetry. This is one reason why popular astrologers insist that the Piscean is a dreamy and spiritual person, often with a very tenuous grip on practical affairs.

The early Christians linked the symbol of a fish with Christ, and it appears frequently

Left a dolphin, as conceived by the 15th-century artist, represents Pisces on the FitzJames Arch in Oxford

in early Christian images. The link with Christ was reinforced in the structure of the zodiac, for the sign of Pisces was directly opposite to the sign of Virgo – which from relatively early Christian times was associated with the Virgin Mary. Not surprisingly, a number of early Christian pictures and carvings showed a woman carrying, or even suckling, two fishes: such images belonged to the esoteric tradition that sought to connect pagan astrology with the Christian faith. There are examples on the 12th-century bronze doors of the church of San Zeno in Verona, in northern Italy. There is another on a column at Chartres Cathedral.

In some cases the image of the twin fish was altered to that of a single fish. Very often this was the dolphin, which was the earliest symbol for Christ. The Pisces in the Merton Arch zodiac is just such a dolphin.

At Chartres there is also a single fish to represent Pisces – this time a carp. However, it also appears in a significant association with another sign. As described earlier, the main 'astrological' arch at Chartres is incomplete: only 10 zodiacal figures appear around the door. Gemini and Pisces appear beside the southern door as though their importance is being emphasised. Gemini is represented as two knights standing behind a single large shield. The shield points downwards, as it were, to the single fish below.

As we have already seen, the martial representation of Gemini symbolises the Knights Templar, who furnished the wealth to build the cathedral: the image of Pisces represents the Christ whom the Knights served. Thus this last of the zodiacal symbols takes its place in the astrological schema at Chartres – a schema that speaks of the hidden links with pagan astrology, not admitted by 'official' Christianity, that were kept alive by artists and esoteric thinkers down the centuries.

Right: Pisces, from the group of zodiac sculptures by Antelami, in the baptistry at Parma, Italy. The fish are associated with a man digging, who represents the appropriate month, February-March

Left: on the doors of the church of San Zeno, in Verona, Italy, Pisces is represented as two fish being suckled by a woman. This reflects the link between Pisces and Virgo, the signs directly opposed in the zodiac; and also the association of Pisces with Christ, and Virgo with the Virgin Mary

'As above, so below'

Although astrology has always been regarded as a mysterious and occult art, recent research has suggested it is scientifically valid. The first part of this series examines the nature of a horoscope and its use in predicting future events

Above: 'Mars rules in Scorpio by day, and in Aries by night. He exerts his influence in all manly pursuits: fencing and athletics and the arts of war.' An illumination from the 15th-century treatise on astrology, *De sphaera*

EVERY DAY, MANY MILLIONS of people turn to a section of the newspaper with a heading such as 'Your Horoscope for Today', and more than 60 per cent believe what they read there. At parties, guests greet one another: 'What are you?' 'I'm a Libran.' 'Oh good, we should get on together, I'm an Aquarian.'

This is the stuff of the common understanding of astrology, and it is arrant nonsense. A horoscope is a map – a rather simple, stylised map – showing the positions of the planets (a term that, in astrology, includes the Sun and Moon) in relation to each other and to Earth; at any given moment, the horoscope is exactly the same for everybody. And to say 'I'm a Libran' is to say no more than 'I was born between 24 September and 23 October'. Yet if you told your fellow guest at a party 'I was born on 10 October', it would sound rather ludicrous for him to reply 'Oh good, I was born on 15 February'; he is far more likely to say 'That means you're a Libran' in a significant tone, as if that implied a lot more.

People who understand astrology, and who take at least some part of it seriously, know that it is a subject far divorced from this popular mumbo-jumbo. They know that it is not a matter of 'What your stars foretell' – and, indeed, the stars themselves do not enter into any astrological calculations. Yet most criticisms by scientists against astrology are directed at just such misunderstandings – the former Astronomer Royal, Dr Harold Spencer Jones, could write, for instance: 'It is significant that I do not know of any astrologer who is an observer of the stars, nor do I know of any serious observer of the stars who is an astrologer.' It seems, in fact, that most of those who dismiss astrology as pure superstition have never bothered to find out what it is and how it is practised. This dismissive attitude is as intellectually shortsighted as the gullible belief in 'Your Horoscope for Today'.

Left: the great circular 'calendar stone' that once stood halfway up the pyramid of Tenochtitlan in Mexico. The two circular 'zodiacs' represent all the days of the Mayan year

A science for love and war

Astrology is one of the oldest of the sciences, and for more than 2000 years it was synonymous with astronomy. It was established in Babylonian times, flourished in Egypt, was practised by the Greeks and Romans, and kept alive – like most other sciences – by the Arabs. And as a science it was similarly studied in China, in India, and in central America.

The principle behind the practice of astrology is very pithily expressed in a phrase that was believed to have been coined by

Left this wooden mummy-case, now in the British Museum, is from west Thebes and once held the body of Sheik Abdu'l-Qurna. It shows the goddess Nut surrounded by signs of the zodiac

Below: how the Sun appears to be in the different constellations of the zodiac. The Earth moves round the Sun, taking 12 months to complete its orbit; and, if it were possible to see the star background to the Sun during daylight, it would appear that the Sun was in a particular constellation throughout each month. It is easy to work out that the constellation due south at midnight is diametrically opposite to the constellation in which the Sun is to be found

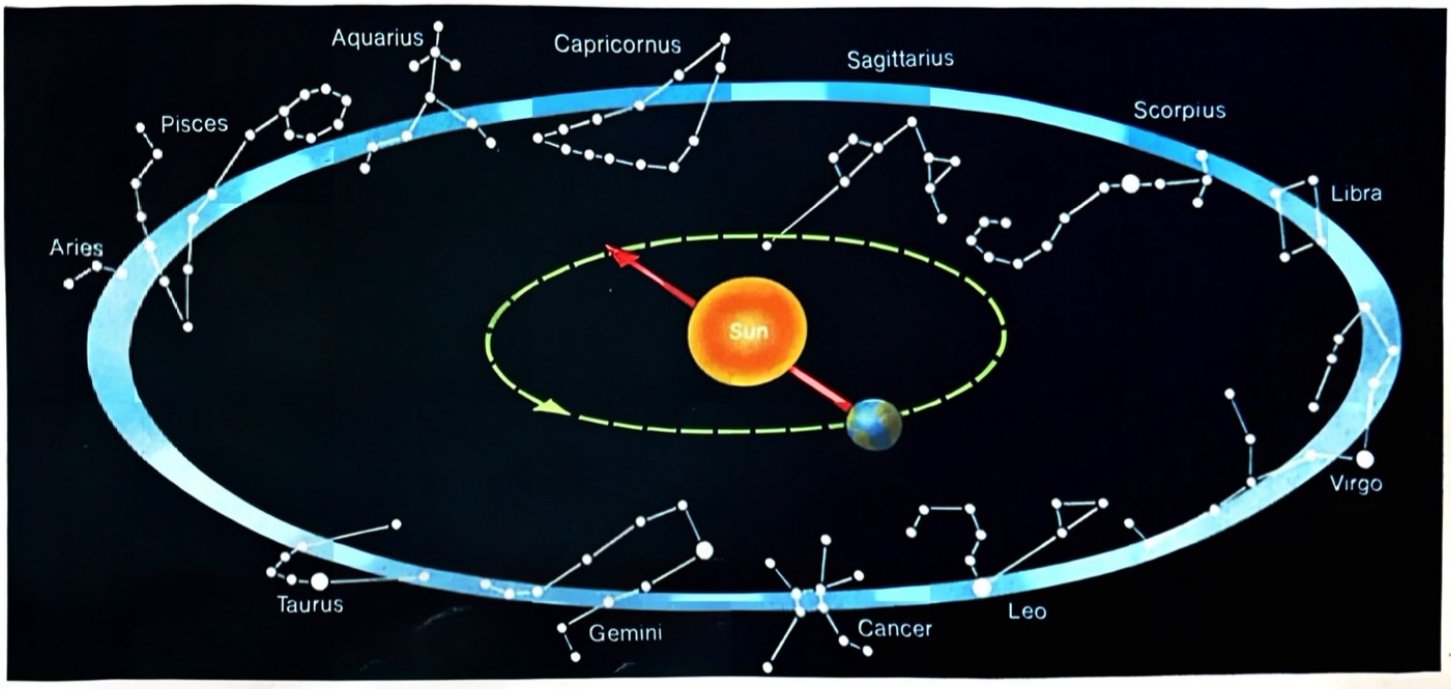
the Egyptian magician Hermes Trismegistos ('thrice-great Hermes'): 'As above, so below.' In other words, events on Earth reflect those in the heavens. The astrologers saw the planets – the word means 'wanderers' in Greek – moving purposefully or erratically against the background of the starry skies; and they supposed that the actions and experiences of these distant gods would be reflected in human affairs. When Mars, the god of war, burnt angrily in the night sky it was a time for quarrels and martial pursuits; when Venus glowed brightly as night fell, it was a time for love.

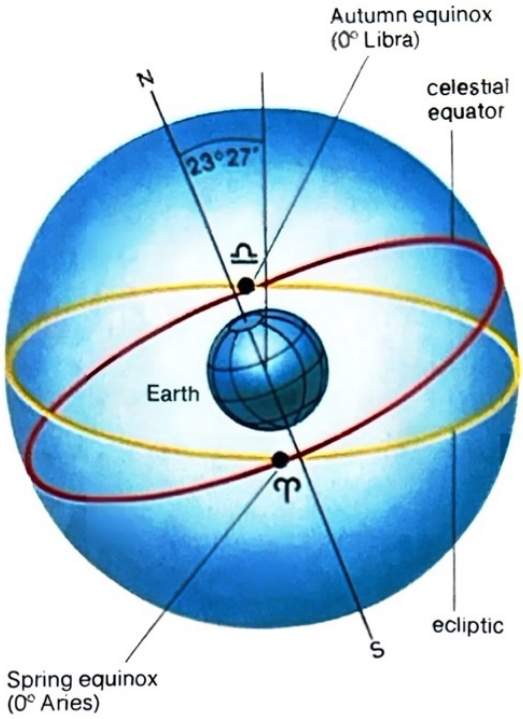
Circle of animals

The astrologers soon observed that the planets stayed within quite a narrow band of the sky, never moving far away from the path of the Sun – the ecliptic. This band was marked by particular constellations and, since there were 12 months (Moon cycles) in the year that it took the Sun to return to its original position, they identified 12 constellations as marking the months. At some time very early in the history of astrology in Babylonia, these constellations were given the names of mythic animals or persons, and the word zodiac means 'circle of animals' in Greek.

In fact, the 12 constellations do not divide the year equally between them, and few of them even vaguely resemble the animal they are named for. Worse than that: when we say (for instance) that Mars is in Aries – that is, apparently making a statement that Mars in the night sky can be seen against a background of the constellation Aries – this is just not true. Some 3000 to 4000 years ago, however, it was true.

As we now know, the Sun and the other planets do not move round the Earth; it is the Earth that moves, like the other planets,





Left: in all simple astronomical and navigational calculations, the Earth is envisaged at the centre of the celestial sphere, which revolves along the line of the Earth's equator, while the apparent path of the Sun, the ecliptic, is at an angle to it. The equinoxes are the two points at which the ecliptic intersects with the celestial equator, and are defined as 0° Aries in spring, and 0° Libra in autumn

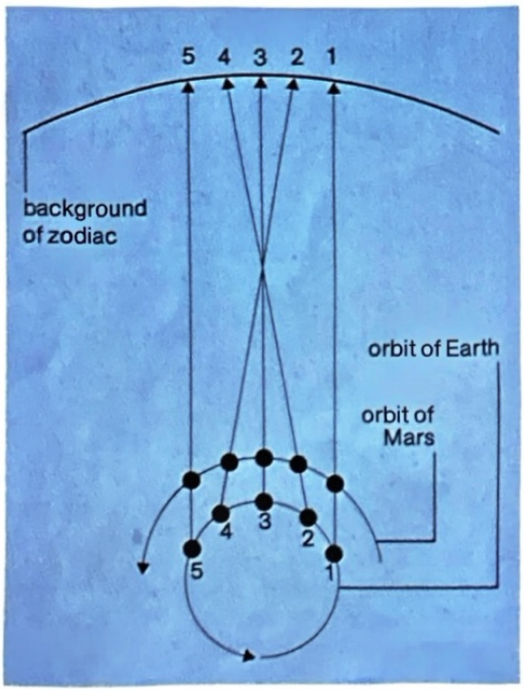
round the Sun, so that the Sun is against a different part of the background zodiac every day, and against a different constellation every month. In fact, of course, the Sun is so bright by day that we cannot see its star background; but during the night we can see the parts of the zodiac that are opposite the Sun by 12 hours, and so easily work out which constellation the Sun is 'in'.

However, the Earth, as it goes round the Sun, leans its axis of rotation by 23°27′ to the side. When the northern pole is leaning toward the Sun it is summer in the northern hemisphere, and the days are long; in winter the northern pole is leaning away from the Sun, and days are short. There are only two days every year on which the 24 hours are equally divided between night and day; these are the spring and autumn equinoxes, which occur usually on 20 or 21 March, and 22 or 23 September.

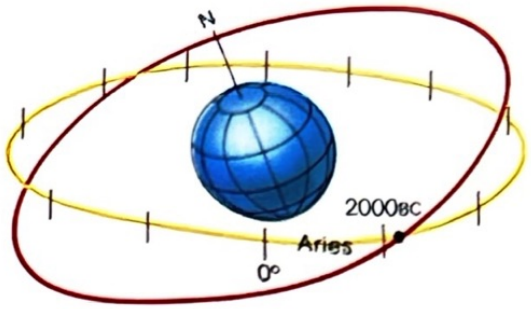
Four thousand years ago, when astrology was young, the Sun was in the constellation of Aries – or, more accurately, that twelfth of the zodiac in which Aries is situated – at the spring equinox. About 2000 years ago, the point on the zodiac circle marking the Sun's 'entering' at the spring equinox was therefore designated 0 Aries, the autumn equinox being 0 Libra.

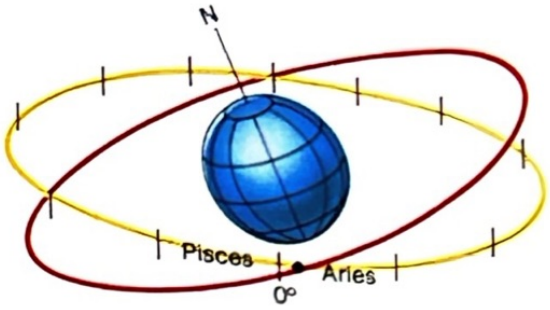
Night and day

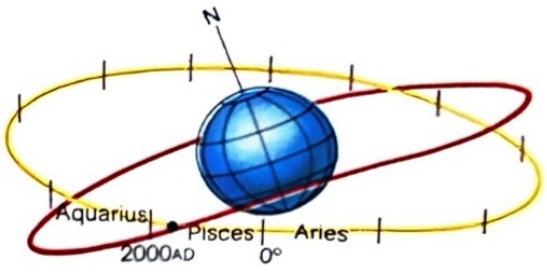
But the Earth is not just leaning to one side as it circles the Sun; it is also wobbling very slowly like a spinning top that is beginning to slow down. As a result, the direction in which it leans gradually changes. This gives rise to a phenomenon known as the 'precession of the equinoxes', which was discovered by the Greek astronomer Hipparchus about 120 BC; the result of the wobbling is that the position of the spring equinox constantly moves: in



Right: a diagram of the phenomenon known as the precession of the equinoxes The spring and autumn equinoxes are those two days in the year when day and night are of equal length; and because the Earth is slowly wobbling on its axis, the Sun appears in a different place in the zodiac each year at the equinox. About 4000 years ago the Sun was moving into Aries at the spring equinox (top); it gradually appeared to move backward through Aries, so that after about 2000 years it was at 0° Aries, and about to move into Pisces (middle). The position of the Sun at the spring equinox was then named 0° Aries, and this has defined the zodiac circle ever since. The equinox has now moved most of the way through Pisces, and within some 20 years will 'enter' Aquarius (bottom) – but the spring equinox will still be 0° Aries







Left: the word planet means 'wanderer', and many of the planets appear to move erratically about the sky, sometimes apparently going back on their tracks for days or weeks. In the diagram, it is clear how Mars appears to move backward between positions 2 and 4

2000 years it moved right through 30 of Aries, and it is now most of the way through Pisces. As we near the end of the 20th century, the spring equinox is moving out of Pisces and into Aquarius. This is what is meant by 'the dawning of the Age of Aquarius'. In another 20,000 years the equinox will once more be at 0 Aries. But, for navigational, astronomical and astrological purposes, the spring equinox is always designated 0 Aries.

This, then, is one of the reasons why popular talk about 'Sun signs' has so little significance. Three thousand years ago, when we said of somebody's birth that the Sun was in Scorpio, we meant just that; 1000 years ago it was in Libra; soon it will be in Virgo. But we still say of someone born in November that they are a Scorpian.

It is, in fact, the movements of the planets themselves that we are concerned with, not the star background against which they can be seen. They are like the many hands of a giant astronomical clock, and in recording their exact positions we are identifying a precise moment. This is what the horoscope does: it pinpoints the positions of the planets in the zodiac, as seen from Earth, and also their positions in relation to one another.

To the ancient astrologers the argument was transparently obvious. Since events in heaven were reflected by events on Earth, and since it was possible to predict the future positions of the gods (the planets) months or years in advance, then from knowledge of those positions it should be easy to predict events upon Earth.

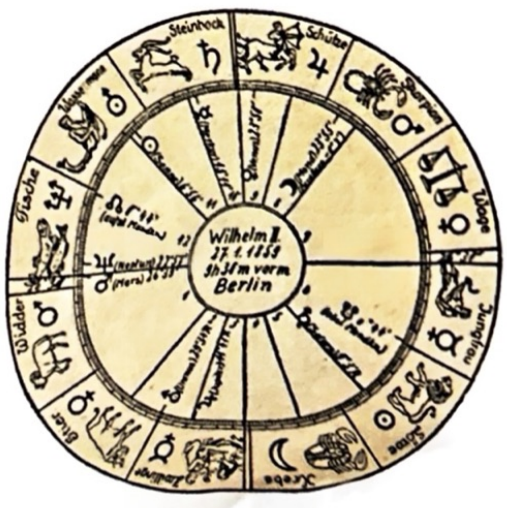
Planets are not gods . . .

Modern critics of astrology, who know that the planets are not gods and that heavenly phenomena are not reflected in earthly happenings, find it easy to dismiss the whole matter. There is no way in which some remote pieces of rock (or balls of gas) can affect human nature and destiny, they claim. And they are perhaps right.

However, this argument does not rule out the possibility of prediction. Suppose you receive a letter from your uncle, saying that he will be leaving his country home at about 10.15 a.m. and asking you to meet his train. A glance at the timetable will tell you that the only train he could possibly catch will arrive at the terminus at 1.05 p.m. An enquiry at the station will tell you that the train normally arrives at platform three. If you have a contact in the railway offices, you can probably discover the name of the driver of the train, the colour of the engine and its head code, and possibly all sorts of related facts.

If you take a friend with you to the station, you can tell him a surprising amount about future events. Pointing to the station clock, you tell him that when the two hands are together – in astrological terms this would be described as 'in conjunction' – a number of

Above: 'May', from the 15th-century codex *Les très riches heures du Duc de Berry*. The month, as the portion of the zodiac above the illustration shows, is divided between Taurus and Gemini



Left: a conventional horoscope drawn for Kaiser Wilhelm II. The horoscope is divided into 12 'houses' that do not correspond with the 12 signs of the zodiac; while the positions of the planets are indicated as degrees of angle within each zodiac division

things will happen: a blue engine (and you may even know its name and number), with the head code 06 and driven by a man named Harry Grimshaw, will arrive at platform three, and that a middle-aged man with glasses, walking with a stick, will get down from it. Your friend will be amazed: how could all these events have been caused by the influence of two hands on a clock?

The astrologer works with something very like a railway timetable. It is called an *ephemeris*, and it gives the positions of the various planets in the heavens at any particular time. Astronomers use very similar tables, and so do all sea and air navigators – in fact it is possible to draw up a horoscope perfectly satisfactorily from a 'nautical almanac'.

Astronomical aspects

It has been objected that the discovery of the planets Uranus, Neptune, and Pluto, which were unknown to the ancient astrologers, must have invalidated everything that went before. However these distant planets are relatively slow-moving, like hands on a clock that tell the century, the decade and the year. Uranus, for instance, remained in Libra from 1968 until December 1974; Neptune entered Sagittarius in 1970 and leaves it in 1984; Pluto takes from 1971 to 1983 to pass through Libra. So the 'influence' of these planets in the horoscope is equally slow-moving; of far greater significance to the modern astrologer is the relation of the position of one planet to another, something which is called its 'aspect'.

Astrological interpretation, in fact, falls into two distinct parts. First comes the drawing up of a horoscope. This need not be drawn up for the moment of a person's birth; it can just as well be for an event like a wedding or the issue of some new company stock. However, the Moon and Mercury move very rapidly through the horoscope, resulting in quickly changing aspects, and so the moment for which the horoscope is drawn should be defined as accurately as possible. It is mainly for this reason that the horoscopes most commonly drawn are natal horoscopes.

From a natal horoscope an astrologer claims to be able to make a detailed description of the physical attributes and spiritual nature of its subject, based upon 4000 years of experience. Working from such a deep understanding of the subject, it is then possible to make predictions of the way in which he or she will behave and develop in the future. Few present-day astrologers, even the most famous and successful, go much beyond this point. They may suggest, after calculating the future positions of the planets, the most favourable time for some enterprise, but not many are prepared to make detailed predictions of future events.

The truly predictive part of astrology, in fact, is a complex and time-consuming operation. It is necessary to draw up the horoscopes for various precisely defined times in the future, and then to relate these to the natal horoscope of the person whose fate is being considered. It is here that astrology begins to lose its credibility, for astrologers – in order to cut down the time involved in going through a succession of constantly changing horoscopes – have introduced the concept of 'secondary directions'. By this means the subject's horoscope is 'progressed' by periods of a day from the moment of birth, each day's changes in the positions of the planets being taken to represent a year, or a month, or a week in the subject's life – whichever the astrologer prefers. Whatever justification there may be for believing that the accurately drawn horoscope does contain useful information, there is none whatsoever for this artificial principle of progression.

Right a set of horoscopes cast by the English astrologer (but drawn up after the event) for the birth, coronation and death of Louis XVI of France and his queen Marie-Antoinette

Left: a horoscope for the birth of John Milton, drawn up by the English astrologer John Gadbury. It is drawn in typical 17th-century style – the 12 triangular divisions surrounding the central square each represent one of the 12 'houses'

How to cast a horoscope

MIllions of people scan their 'stars' in the newspapers every day. But a horoscope prepared for an individual would read very differently. Drawing up such a detailed chart of the heavens is a complex but fascinating exercise

A HOROSCOPE IS A MAP – a map of the zodiac circle, with the Earth at its centre, and all the planets in the positions in which they can be seen from Earth. Some of the planets move relatively fast – the Moon, for instance, moves through more than one third of one 'sign' of the zodiac in the course of 24 hours – so the appearance of this map changes from minute to minute.

The basis of the horoscope has changed very little in 5000 years. The ancient Babylonians recognised that the stars were on a sphere that revolved once about the Earth every day, but that shifted very slightly in each revolution so that it did not return to its original orientation until the year had passed. Within this sphere the planets circled the Earth: the Sun went round the Earth once a day, the Moon rather faster, so that it passed through all the constellations of the zodiac in the time it took the Sun to pass through one. The other planets moved at different speeds, sometimes moving fast in one direction, then hesitating and going back on their tracks before moving forward again. This picture of the Universe is still employed in all navigational calculations and in many everyday astronomical ones.

Of course, we cannot see the stars in the daytime, nor can we see what is below the Earth's rim at night, but it does not require much observation to be able to work out that

An illustration from the 17th-century atlas *Harmonia macrocosmica* by Andreas Cellarius. Viewed from the southern hemisphere, the constellations of the zodiac run in reverse order, from Taurus, here seen as the ascendant sign, through Aries, Pisces, Aquarius and Capricorn, to Sagittarius disappearing below the western horizon

the stars remain fixed in their positions on the heavenly sphere, so we know exactly where they are in relation to the Earth, even when they cannot be seen.

Stand facing due south on a clear night at about midnight. To make things easily understandable, the winter solstice, just before the end of December, is a good time to choose for this example; and, for convenience, assume you are in the northern hemisphere. At that time of year the Sun is said to be moving from Sagittarius into Capricorn but, because of the precession of the equinoxes, it is actually in Scorpio. Since it is

midnight, the constellation of Scorpius will be directly beneath your feet, and the constellation of Taurus will be visible in the southern sky. Eastward from Taurus, the constellations will be Gemini, Cancer, and Leo; westward they will be Aries and Pisces.

That is what you will actually see in the sky; but all astronomical and navigational tables are based on the assumption that the spring equinox is still at 0° Aries, as it was nearly 2000 years ago. So we must now imagine an entirely artificial zodiac circle, in which the Sun is just entering Capricorn, with Cancer just coming to the mid-heaven in the southern sky at midnight; then, eastward, the zodiac signs will be Leo and Virgo, with Libra just appearing over the eastern horizon; and westward will be Gemini and Taurus, with Aries disappearing below the western horizon.

The zodiac in the heavens

We begin to draw our horoscope, therefore, as a circle, divided into 12 equal parts to represent the 12 parts of the zodiac, which approximate to the 12 months. The top of the circle represents the mid-heaven, the highest point of the Sun's daily travel, and to the left and right are the eastern and western horizons. As the Earth revolves (from right to left, as it were), Libra will gradually rise in the east; at midnight of the winter solstice it is the ascendant sign. At dawn the ascendant sign will be Capricorn; and at midday the ascendant sign will be Aries.

At midnight, the Sun will be in the lowest part of our circular map, and so we mark it there. On the night of 22 December 1980, it was at 1° Capricorn. Mercury and Venus always remain fairly close to the Sun, and so they will not be visible in the midnight sky. In fact, on the night we have chosen, only the Moon is visible, almost due south and high in the sky; Mars, Jupiter and Saturn are below the horizon. From a set of tables known as an *ephemeris* we can get the figures for their positions: Mercury at 26° Sagittarius, Venus at 6° Sagittarius, Mars at 23° Capricorn, Jupiter at 9° Libra, Saturn at 9° Libra (in what is called a conjunction between Jupiter and Saturn).

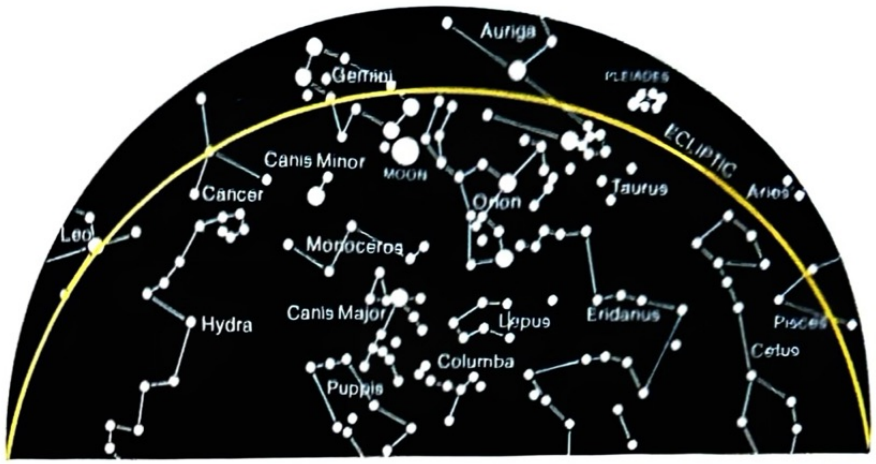
There are also, of course, the planets that we cannot see, and that were only discovered within the last 200 years. Uranus is at 28° Scorpio, Neptune at 23° Sagittarius, and Pluto at 24° Libra. We can see from these figures that later in the night, before sunrise, first Jupiter and Saturn will rise, then (if we could only see it) Pluto, then Uranus, then Venus, Neptune and Mercury (the morning star) in that order. Mars will not be visible because the Sun will rise before it, and once the Sun has risen the stars and planets cannot be seen.

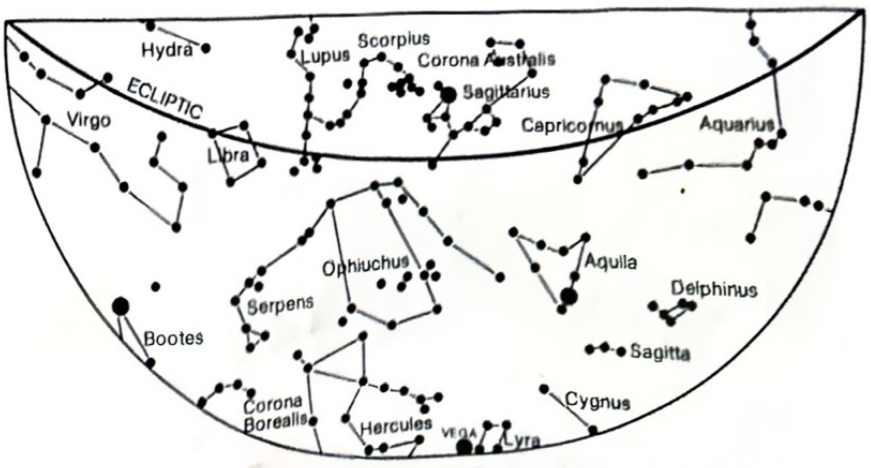
To draw up an accurate horoscope, so as to get the ascendant and the mid-heaven in exactly the right orientation, clock time is not

Left, this third century Roman mosaic shows the close relationship between Ea, the Babylonian god of the oceans, and Poseidon, the Greek and Roman god. As *suhurmarahu*, the fish-goat, Ea gave his name to the constellation we now call Capricorn.

Below, the sky as it appeared in the northern hemisphere at midnight on 22 December 1980, together with the portion of sky containing the other half of the ecliptic that cannot be seen at night (bottom), and the equivalent horoscope for that hour (below right). In the sky, Taurus is in mid-heaven, and the Sun is 'in' the constellation Scorpius. In the horoscope, which makes no allowance for the precession of the equinoxes, the Sun is in Capricorn.

Far right, in traditional astrology, each sign of the zodiac is associated with a particular part of the body





♑	Capricorn
♒	Aquarius
♓	Pisces
♈	Aries
♉	Taurus
♊	Gemini
♋	Cancer
♌	Leo
♍	Virgo
♎	Libra
♏	Scorpio
♐	Sagittarius
☉	Sun
☽	Moon
☿	Mercury
♀	Venus
⊕	Earth
♂	Mars
♃	Jupiter
♄	Saturn
♅	Uranus
♆	Neptune
♇	Pluto

sufficiently accurate. Clock time is derived from Greenwich Mean Time; that is, from a calculation of the average length of a day, and the establishment of the average time at which the Sun is due south and at its zenith – because of small variations in the movement of the Earth, midday by Sun time can be as much as 20 minutes out. Astrologers therefore use star time, or 'sidereal time', which is similarly measured from the equinox; astronomers also use sidereal time to calculate at which part of the sky to point their telescopes, so that they can observe a particular star at a particular time.

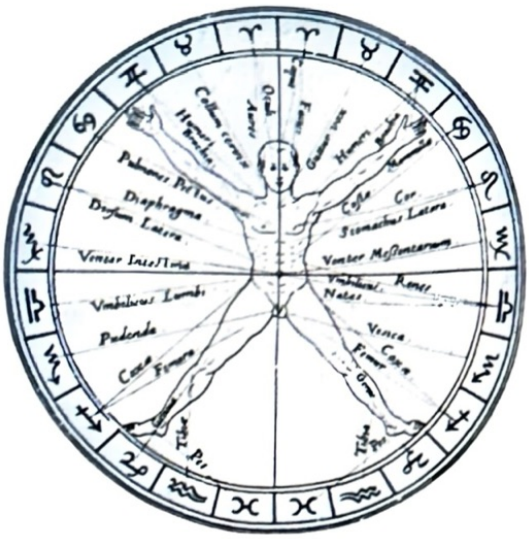
Casting a horoscope

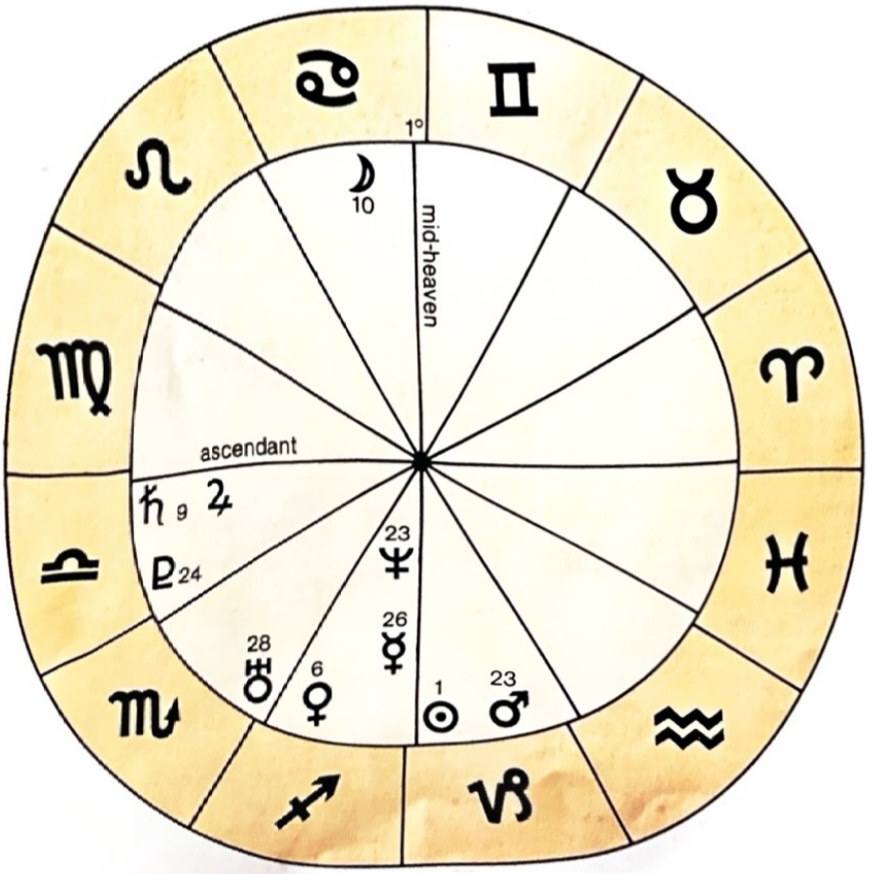
It is also necessary to make corrections for local clock time. When it is midnight in Britain, on or near the Greenwich meridian, it is midday in the central Pacific, with the Sun blazing high in the sky, and the sign of Aries just rising on the eastern horizon. Fortunately the calculations to change local time to GMT and then to sidereal time are very simple; once they are done it is a matter of minutes to look up the planetary positions in the *ephemeris* and draw up the horoscope.

This, then, is a horoscope: a map showing the positions of the planets relative to one another, and their orientation within the zodiac circle. Earth is the small dot at the centre of the circle, and all the way down the Greenwich meridian to the equator the horoscope remains essentially the same. Below the equator, where the Sun appears not in the southern sky but the northern sky, the map, or horoscope, is simply inverted.

The interpretation of the horoscope is based upon certain long-established rules. The Sun represents the real self, the fundamental ego; the ascendant represents the physical characteristics, the outward appearance; and the Moon denotes the soul, the subconscious psychological nature. In the horoscope we have drawn up the Sun is unequivocally in Capricorn, and will remain there for nearly four weeks; the Moon is in Cancer for two days before moving into Leo; and the ascendant sign is Libra.

In popular magazine astrology, it is only the position of the Sun that is considered: someone born in late December or the first three weeks of January is a Capricornian, and





that is all that need be said. Capricornians, say the astrological textbooks, are strong-willed but self-centred, suspicious of others, clever in argument but likely to lose control of the situation by a sudden outbreak of irresponsibility. But Moon in Cancer denotes someone who is emotionally committed to domestic security and a stable marriage; while the ascendant Libra suggests someone of average height, well-formed and good-looking, with long blond hair, blue eyes and a healthy complexion.

Conjunctions and characters

This is just the beginning of astrological interpretation. Venus in Sagittarius is supposed to indicate a frank and open person, but one who values religious conformity; while Mercury and Neptune in conjunction in Sagittarius would be interpreted as revealing someone who could gain a reputation as a prophet. Mars in Capricorn denotes the attainment of material success and social standing; Jupiter and Saturn conjunct in Libra suggest someone who will apply experience to the settling of all kinds of problems, and probably become wealthy thereby.

There is no doubt that this kind of analysis already begins to give us a picture of a certain kind of person; whether any of those born at midnight on 22 December 1980 really

Right: in India, as in all other developed cultures of the world, astrology was long established as a science. This border design, from the early 17th-century *Jahangir's album*, reveals that the working tools of the astrologer have hardly changed in the course of many hundreds of years

develop in this way remains to be seen. Traditional astrology goes further; and it is particularly in these further refinements that modern scientific research has shown some correlation with the traditional beliefs.

Planetary aspects

In the more detailed analysis, the 'aspects' become of particular importance. These are the positions of the planets relative to one another in the sky. We all know, for instance, that when the Sun and Moon are in conjunction, or when they are opposed, as in the horoscope under discussion, the aggregate gravitational pull produces the phenomenon known as spring tides; while when the two are at right angles to one another – square, as it is known in astrology – the height of tides is at a minimum and we get neap tides. A similar kind of gravitational effect can be envisaged as being produced by the smaller or more distant planets: two planets conjunct or opposed reinforce each other's effect; two planets square to one another – separated by 90° or three zodiac signs – reduce each other's effect; and planets 'trine' to one another – that is, making up the points of an equilateral triangle, and separated one from the other by 120° or four signs of the zodiac – are balanced when there are planets at all three points of the triangle, but otherwise 'drag', as it were, the planetary effect to one side when there are only two.

One other element of astrological interpretation needs to be considered before the significance of the horoscope is fully understood. The ancient Babylonians saw the planets wandering about the sky like travellers in the desert; and they imagined that every so often they returned to their own houses, which they ruled like the master or mistress of a household. The Sun, obviously, was at the height of his powers in midsummer: he ruled in the house of Leo. The Moon, the queen of the planets, sat at the Sun's left hand: she ruled in Cancer. The other five planets, who roamed through day and night, each had two houses: one for daytime, and one for night-time. Thus Mercury ruled in the day house of Virgo, and in the night house of Gemini; Saturn ruled in Capricorn as his day house, and in Aquarius at night; and so on. When the planets were in their houses, their influence was believed to be particularly strong.

A rather different concept of houses was subsequently introduced: in due course some

Right: an Arabic model of the celestial sphere, made in the 18th century

Far right: a diagrammatic representation of the celestial sphere. The stars should be imagined painted on the inside surface of the sphere, with the Earth as a tiny point at the centre. The thick horizontal ring represents the horizon, so that the part of the heavens visible at any time is the interior surface of the sphere above the horizon. The celestial equator is the projection of the Earth's equator onto the sphere, and the ecliptic represents the apparent path of the Sun. The zodiac constellations lie in a band along the ecliptic. The sphere is envisaged divided into 12 'houses', each house being the home of one of the planets

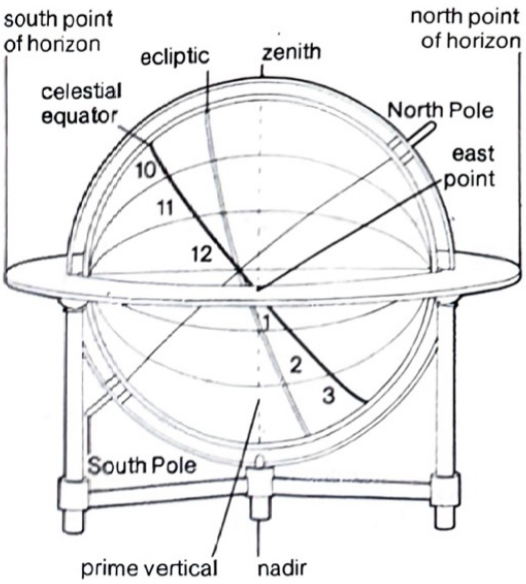
astrologers began to define the mid-heaven as the dividing line between two houses. If this is so, and we then divide the horoscope into 12 houses of equal size, that to the east of the zenith will contain 29° of the sign at the zenith and 1° of the next sign west, and so on all round the circle. The great astronomer and astrologer Ptolemy, who practised in Alexandria in the second century AD, employed this method of house division, which is known as the 'equal house' method.

Arabian wisdom

In later centuries the Arabs, who had gained possession of all the ancient manuscripts from the library at Alexandria, became fascinated with mathematics, and introduced all sorts of complicated methods of calculating house divisions. The equal house system of Ptolemy divides the ecliptic – the apparent path of the Sun through the zodiac – into 12 equal houses. The system of the Arab mathematician Ibn Ezra – known in Europe as the Regiomontanus system – divides the celestial equator into 12 equal houses. This is all very well for astrologers near the Earth's equator, for there the difference is negligible, but in the high latitudes as much as 50° of the zodiac must be crammed within 30° of the horoscope for certain signs, while other signs must be stretched so that only 15° occupy one twelfth of the horoscope. There are other systems, based on different principles, but the most ridiculous of all is the system of Placidus. This is based upon the *time* taken by any degree of the zodiac to rise from the lowest part of the horoscope circle to the mid-heaven. Since above the Arctic Circle many degrees of the zodiac remain always above the horizon, these parts of the zodiac do not appear in a Placidean horoscope at all. The only reason why this extraordinary system has survived is that the most readily available *ephemeris* is Raphael's, which contains tables of houses according to Placidus.

Each house of the horoscope is also credited with controlling some part of the subject's destiny, from servants, conditions of employment, illness and recovery (house 6) to secrecy, the psychic faculties and places of concealment (house 12); but astrologers have never been able to agree on whether the division of the horoscope into 12 equal houses should be made from the ascendant, or the mid-heaven, or whether the ascendant or the mid-heaven should fall in the middle of its respective house. Houses are considered very important by many modern astrologers – they are held to represent, in a unique way, the fate of the individual. But the confusion about house division means the significance of the various planets relative to their houses has always been a little obscure.

This has been a very brief survey of the beliefs involved in the interpretation of a drawn-up horoscope; but some understanding of the principles involved is necessary in order to appreciate the remarkable discoveries that have been made in the past decade, discoveries that suggest there may be some justification in the age-old beliefs of astrology.



Above: another illustration from the 15th-century manuscript *De sphaera*. The Sun rules only by day, and his house is in Leo. The human occupations over which he exerts a particularly strong influence are concerned with power and domination over other people

Out of the cosmic storm

Astrologers have always held that the planets influence our lives in quite specific ways, and some modern research seems to back up this claim. How does astrology work, and why?

ASTROLOGY IS A VERY ANCIENT SCIENCE: its tenets and principles have come down to us over thousands of years, so that now it is impossible to separate the original beliefs from those that have accrued to them over so many generations. Yet much of what is today considered traditional in astrology comes from no farther back than the end of the 19th century – a time when the study of astrology was suddenly revived in both England and France. The association of astrology with the Tarot cards, for instance, dates from this period; there is no historical connection whatsoever between the two, except insofar as the 22 Tarot trumps are the remnants of a much larger set of some 50 cards that at one time included 12 that represented the signs of the zodiac, with another seven to represent the planets.

Some measure of the confusion created by the 19th-century occultists can be obtained from the so-called 'tables of correspondences' published in 1909 in *Liber 777* by Aleister Crowley. There are altogether 194 tables, which provide the equivalents of the letters of the Hebrew alphabet to the planets, the spheres and the elements; to colours, Tarot cards, Egyptian, Roman and Hindu gods and goddesses, plants, precious stones, drugs, perfumes, and all sorts of concepts.

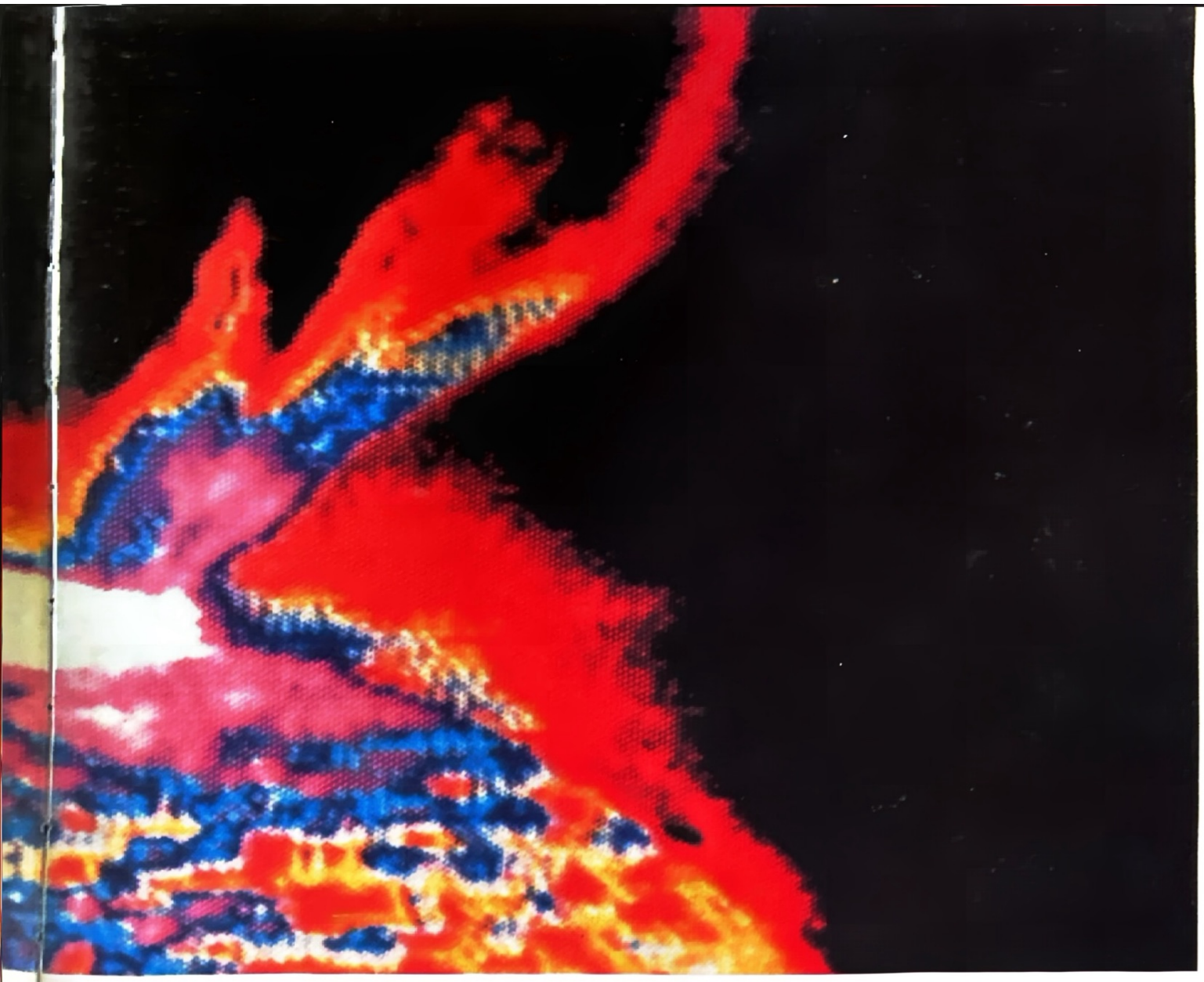
Magic and number symbolism

Crowley made much of this up for himself; parts he got from English occultists of the 1880s and 1890s such as L. Macgregor Mathers; some can be traced back to medieval magical writers such as Cornelius Agrippa; and a few scraps can be attributed to Roman astrology and to the beliefs associated with the Jewish *qabalah*. This system of 'correspondences' is very clearly a development of the 'as above, so below' principle designed to cover every contingency. Although it is completely artificial, this sort of thing is frequently made an essential part of what is taught in contemporary courses in astrology.

The sceptic may be forgiven for finding some of the fundamental principles of astrology equally questionable. When one reads, for instance, that the typical Pisces native has unusually prominent eyes and a fleshy body, with some kind of peculiarity about the feet, and that he or she is likely to be a good swimmer, one is justified in suspecting that the description is tailored to result in something that is essentially fish-like. This apparent anthropomorphism turns up throughout astrology: the Cancerian, for example is said to walk with a peculiar sideways gait; the Sagittarian has a long face with prominent front teeth, and female Sagittarians may wear their hair in a pony-tail; the Taurean is obstinate, with a broad face and thick-set body, and a thick muscular throat.

The characters supposed to be exhibited by the different planets seem to suffer from the same kind of identification. Waite's *Compendium of natal astrology* lists the following 'personal characteristics shown by the planets':

A giant solar flare, perhaps as much as 100,000 miles (160,000 kilometres) in length. The Sun plays such a major part in the lives of everyone on Earth that it is hard to believe that it has no effect upon the destiny of those born at different stages of its annual cycle. The observations made by John Nelson suggest that the relative positions of the planets affect activities on the surface of the Sun and, therefore, the amount of cosmic radiation falling upon the Earth



Sun: pride, generosity, egotism, honour, loyalty, ardour, vitality
Moon: sensitivity, sentiment, maternal instinct, femininity, changeableness
Mercury: quickness, sharpness, braininess, ready wit, flow of words
Venus: beauty, grace, charm, artistic tastes, affection, sociability
Mars: virility, energy, courage, initiative, impulsiveness, passion, aggression
Jupiter: optimism, cheer, generosity, joviality, sport, strength, nobility, ceremoniousness
Saturn: caution, taciturnity, pessimism, self-restraint, profundity, steadfastness

(There are also characteristics given for Uranus, Neptune and Pluto, but they are less important and need not concern us here.)

These are, of course, the characteristics that one would expect the various gods to possess – but why has any particular god's name been given to any particular planet? Mars, of course, by its red coloration, can be identified with the god of war and so with what are generally considered essentially masculine traits; but why should one small, bright, quickly moving planet be identified with ready wit and braininess, while the other is identified with beauty and charm; why should one distant and slow-moving body represent optimism and generosity, and another represent caution and pessimism?

It is when we come to look at the Sun that a possible explanation begins to emerge. Nobody would object to a statement of the following general kind: that children born at midday in high summer tend to be very different in personality from those born at midnight in winter. Many people who would not subscribe to any of astrology's beliefs remain convinced that the season, the time of day and the weather prevailing at the moment a child is born can affect its nature and the way in which it will behave.

Following this line of argument, it is not

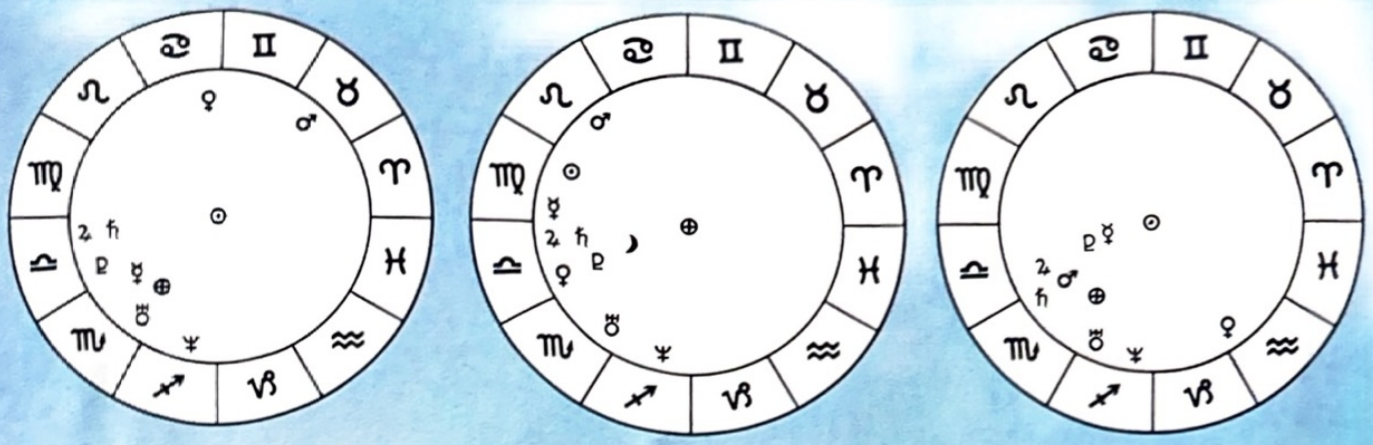
difficult to develop the statement above. Consider the following:

> Recent investigations by a well-known market research bureau have revealed that a high proportion of children born at or near midday during the first two weeks of August are healthier than the national average, generally strong and tall, and frequently blond. As they develop they show good qualities of leadership, being both practical and kind-hearted.

True or not, this is a plausible statement, and would be given due consideration by even the most sceptical scientists; however, had it begun 'Leos tend to be . . .' it would be likely to evoke cries of 'Nonsense!' and 'Superstition!' from the most broad-minded of astronomers and other members of the scientific establishment, so nervous are they of the subject of astrology.

And yet, as has already been pointed out, to say that the Sun is in Leo is to say no more than that the date is somewhere between 22 July and 21 August. Could it be, in fact, that the part of the zodiac in which the Sun is found at this time of year has been named Leo *because* the experience of centuries showed that those born in what we call August tended to exhibit leonine characteristics? After all, the shape of the constellation itself bears little if any resemblance to a lion – and indeed, the precession of the equinoxes means that during August the Sun is now really in Cancer.

It is possible, then, that all the constellations of the zodiac have been named for the characteristics exhibited by those born at that particular time of year. We are dealing with a mass of information gathered over nearly 2000 years by the astrologers of Babylon and their successors – far more detailed than the statistics assembled by the mythical market research bureau invoked above. And it is possible that the names of the planets equally indicate the temperaments of



The Jupiter effect

Much has been made of the so-called 'Jupiter effect'. Jupiter and Saturn, the two largest planets, come into conjunction, or within a degree or two of one another, every 20 years or so. Such an event occurred in 1980–81. Seen from the Earth, Saturn and Jupiter were in conjunction from November 1980 to March 1981, and again in August; seen from the Sun, they were in conjunction in May 1981. In the first edition of their book *The Jupiter effect*, J. Gribbin and S. Plagemann suggested that this conjunction would be accompanied by the lining up of most of the other planets – and Arthur Prieditis, an American writer, predicted world-shattering political upheavals and serious earthquakes.

Gribbin subsequently, however, withdrew much of the substance of his forecast. As seen from Earth, the nearest to a lining up of planets occurred in early September 1981, when Saturn and Jupiter were respectively in 12° and 9° Libra, Pluto was in 22°, and Venus passed through Libra in the course of about three weeks, while the Moon was in Libra from 31 August to 2 September. The Sun did not enter Libra until nearly the end of the month. Throughout this month, Mercury was in Virgo and Mars in Leo, while Uranus was in Scorpio and Neptune in Sagittarius.

Jupiter and Saturn were in conjunction relative to the Sun in May 1981 (left); all planets were together on one side of the Earth in September 1981 (centre); and the closest grouping relative to the Sun occurred in May 1982 (right).
Below: John Gribbin

Seen from the Sun, the planets would have appeared to approach a little closer in 1982. On about 20 May, Saturn and Jupiter were separated by 16°, at 7° Scorpio and 21° Libra respectively, Mars was at 7° Scorpio, Pluto was at 25° Libra, and Mercury was at 29° Libra. The closest that these planets came to one another, therefore, was some 17°; and at this time Earth was in mid-Scorpio, Venus in Aquarius, and Uranus and Neptune in Sagittarius. There was, however, a conjunction of Saturn, Mars, Mercury and the Moon early in June 1981 – but then, this kind of alignment is a fairly common occurrence.

those born when the particular planet was dominant in the horoscope.

As we have seen, the horoscope is a time-map of a particular moment. For a person born at that moment, it gives their 'Sun-sign' – it tells us in which twelfth of the year the birth takes place; it gives us the time of day, in terms both of the position of the Sun in the horoscope circle and of the sign ascendant on the eastern horizon; and it also provides us with the relative positions in the heavens of up to nine other 'markers'.

The most important of these is the Moon, which moves right through each of the signs of the zodiac in less than three days. We accept that Sun and Moon exert a very great influence upon human lives: the Sun because it provides light and heat, and is essential for the production of food and the two together because they combine or oppose their gravitational forces to produce the tides. This is not the place to pursue the argument that mankind has evolved from an essentially aquatic animal, and that there is no reason to suppose that we do not remain as sensitive to tidal forces as present-day fish and plankton. Let us accept it as a possibility, and consider the way in which the movement of the planets can affect the nature of the gravitational and magnetic fields within the solar system.

The solar connection

In the mid 1940s, an engineer with RCA Communications Inc. named John Nelson set up a telescope on the roof of the company's office building in central Manhattan, and began to study the Sun. Nelson knew that unusual sunspot activity was accompanied by serious interruption of radio communications, and his job was to find some way of predicting the occurrence of these 'cosmic storms'. He knew little of astronomy and nothing of astrology, but in due course he discovered that there was a direct connection between intense solar disturbance and the relative positions of the planets – their astrological aspects.

By 1967, Nelson could claim a success rate of 93 per cent in his predictions of severe cosmic storms, out of a total of 1460 specific forecasts. For a severe storm, one of the four inner planets (Mercury, Venus, Earth or Mars) must be at an angle of 0°, 90° or 180° with another planet further from the Sun – relative to the Sun as centre. In addition, at least two other planets must be in an 'angular harmonic' relationship with the first pair, the principal harmonics employed by Nelson being the subdivisions by 2, 3, 4, 5 or 6 of 360° – that is, 180°, 120°, 90°, 72° and 60°. Could it possibly be that it is no more than a happy coincidence that Mercury – traditionally associated with communication by all astrologers – appeared to be the most significant planet in Nelson's investigations?

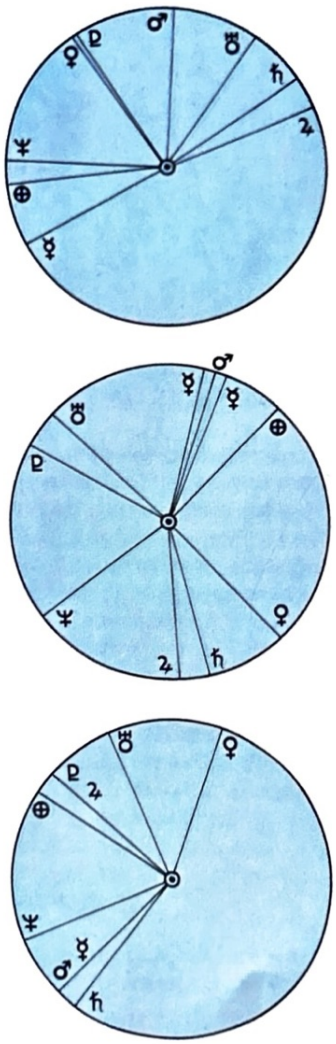
As Guy Lyon Playfair and Scott Hill put it in their book *The cycles of heaven*, 'Nelson's work is an example of what astrology may once have been and still could be: the study of the celestial motions and the *correct* interpretation of their terrestrial effects.' The nature of these terrestrial effects is so far undetermined: it may be no more than some kind of gravitational tide, or it may be the flood of cosmic radiation that accompanies a solar eruption. Many biologists certainly believe that violent cosmic storms can have the most marked effects upon evolution, and meteorologists understand only too well their effect upon the weather. As for the cause of the solar eruptions, it is hardly far-fetched to suggest that they could be the outcome of some kind of solar tidal surge due to the positions of the planets in relation to the Sun.

There are, then, at least two lines of enquiry to be followed. First: since Nelson's work has established a close connection between the positions of the planets relative to the Sun and the outbreak of unusual sunspot activity, is it possible to establish any similar kind of relationship between the aspects of the planets to the Earth and the birth of babies with particular kinds of personality? Second: if this kind of relationship could be proved – which would amount virtually to a proof of some of the most fundamental beliefs of astrology – was the influence upon the development of personality due to gravitational effects, or to the occurrence of different intensities of cosmic shower?

Not long after Nelson had erected his telescope on the roof of the RCA building, and well before the results of his research became public, a young French statistician named Michel Gauquelin, with a sceptical interest in astrology, set out to answer the first question – with unexpected results.

Right: Jupiter, from *De sphaera*. He signifies physical well-being and material success

Below: three of John Nelson's charts, showing planetary positions relative to the Sun when severe magnetic storms took place. Between 23 and 27 March 1940 (top), seven planets were either square or in opposition. From 12 to 16 November 1960 (centre) occurred the worst storm in 20 years, as predicted by Nelson. The greatest ever recorded cosmic shower was on 23 February 1956 (bottom)



The signs of success

In the past 20 years, researchers have produced some startling evidence that appears to back up traditional astrological beliefs

WHEN THE YOUNG FRENCH STATISTICIAN Michel Gauquelin began his investigations in 1950, it was his intention to prove that there was no connection between planetary positions at a person's birth and his future development. He had some previous examples before him: a rather superficial investigation by the famous psychologist C. G. Jung into the astrological relationships of married couples, which he had abandoned as the results became progressively more inconclusive, a vast accumulation of data by K. E. Krafft, the Swiss who was rumoured to have been Hitler's private astrologer, and a statistical analysis by the French astrologer Paul Choisnard, who claimed significant results in such relationships as Sun-Mars in cases of premature death, Mercury-Moon in the nativities of philosophers, Sun-Moon in those of celebrities, and the aspects of Mars in the birth charts of soldiers.

Gauquelin began by comparing the horoscopes of some 25,000 subjects; in France and other countries where it is legally required to register the time of birth of a child, it is possible to calculate accurate horoscopes from birth certificates without the necessity of approaching the individuals concerned. He was soon able to state with confidence that there were no grounds for the wild claims made by Krafft and Choisnard. There was, however, a lesser piece of research carried out by another French astrologer, Leon Lasson, who had found a significant correlation between Mars and its aspects with the ascendants or descendants of 134 politicians, between Venus and its aspects with the ascendants of 190 artists, and between Mercury and the ascendants or descendants of 209 actors and writers.

Putting his data to this test, Gauquelin was surprised to discover that he obtained the same kind of correlation. Taking a sample of no less than 576 eminent professors of medicine, he found that an unexpectedly high proportion were born just after Mars or Saturn had risen or passed the midheaven. In a second group of 508 leading doctors, he obtained a comparable correlation, and he calculated that the odds against this being a matter of pure chance were of the order of 1 million to one.

Fortunately for us – though less happily for himself, for he subsequently became the

Above: traditionally Saturn, seen here in an illustration from the 15th-century codex *De sphaera*, exerts his influence over activities that require mature judgement. The French statistician Michel Gauquelin found the position of Saturn to be particularly significant in the horoscopes of scientists and doctors

Right: Karl Ernst Krafft, a Swiss astrologer, who moved to Germany in 1939. He correctly predicted that Hitler's life would be in danger between 7 and 10 November; in the event, Hitler made a narrow escape when a bomb exploded in a Munich beer cellar

target of much bitter criticism from the scientific establishment – Gauquelin decided to pursue this line of investigation further. From all over France he collected birth data for groups of eminent soldiers, politicians, writers, sportsmen and clerics. In every case, they showed a distinct correlation between the position of certain planets at birth with the subsequent career of the subject. Great soldiers, for instance, tended to have Mars or Jupiter just past the ascendant or the mid-heaven in their horoscopes. Gauquelin calculated that the probability that this was due to chance was as high as one in five million in certain groups.

Statistics and pulp romance

Even more remarkably, Gauquelin discovered that these significant results applied only to those who were truly successful. For instance, in a group of 1458 scientists who had never won a prize, made any important discovery or published more than run-of-the-mill research papers, there was no suggestion of significance in the position of Mars, Jupiter or Saturn at the time of birth.

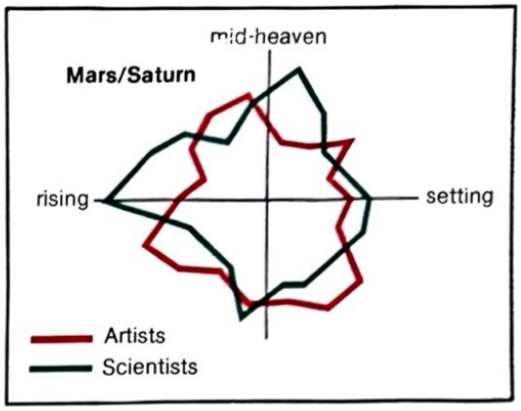
Gauquelin's results provoked a great deal of interest in the French popular press, but for a long time the scientific community could not be persuaded to comment. At length Jean Porte, administrator of the Institute of Statistics, replied that the figures applied only to France: they revealed some kind of national characteristic that had nothing to do with astrology, and the same methods, applied to other countries, would produce quite different results. (Astrologers have pointed out the flaw in Porte's argument: if a different set of correlations for another country were discovered, it would only strengthen their belief that *all* planetary positions are significant in the horoscope.)

A committee of Belgian scientists had been set up in 1953 expressly to study paranormal phenomena; a member of this committee, Marcel Boll, commented:

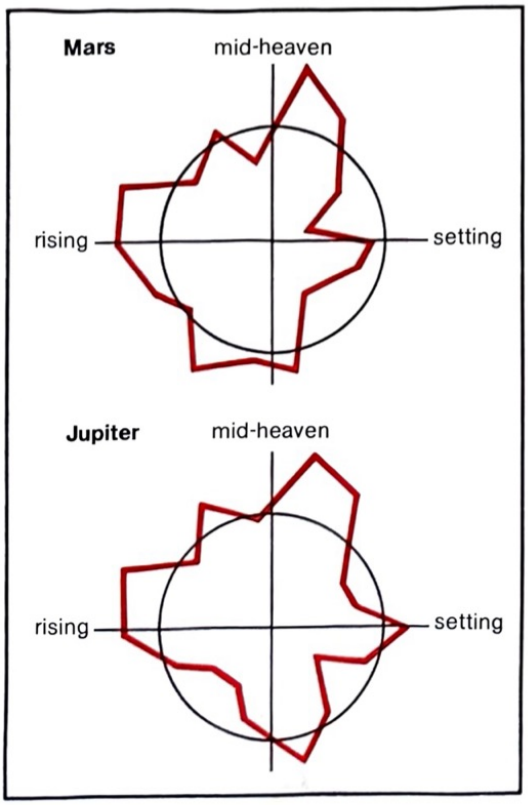
> Your conclusions are nothing but pulp-romances, the worst sort of proof, and the issue is without hope; for if you undertook the same inquiry in Great Britain, Germany, the USA or Russia you would come out with nothing but national idiosyncracies.

Challenged, Gauquelin and his wife set out on long journeys through Germany, Italy, Holland and Belgium to collect data from registers of birth. The results obtained after submission of the data to statistical analysis were substantially the same, with some interesting sidelights. It was found, for example, that Mars appeared in the significant positions for Italian soldiers far more frequently than for their German colleagues. Gauquelin pointed out that one would expect Germans, *as a nation*, to be far more warlike than Italians; so that successful German soldiers were far less in need of a powerful Martian influence in their horoscopes, while the Italians would require (as it were) an overdose of militarism.

Above: the French statistician Michel Gauquelin, who set out to disprove the standard beliefs of astrology. His research led him to a number of unexpected discoveries



Right: graphs showing the positions of Mars and Saturn, combined as a single line, in the horoscopes of 3305 scientists and 2048 musicians and painters. The graph for scientists is well above average at rising and at mid-heaven, whereas the graph for musicians and painters is significantly below average in these positions



Left: graphs showing the positions of Mars and Jupiter in the horoscopes of 3142 military leaders. The circle represents the average distribution that would be expected in such a large sample, and the solid line indicates the number of people with either planet at a particular angle in their horoscope. Significantly high departures from the average can be séen for planetary positions just above the horizon and just past mid-heaven

Science and the stars

Gauquelin and his wife collected birth data for more than 25,000 people. In the charts of 3305 scientists, Mars was found in one or other of the significant positions 666 times, where chance would have predicted 551 – the odds against this were computed at 500,000 to one. In the charts of 3142 military leaders, Mars was associated with the ascendant or the mid-heaven (with an additional small increase at the nadir, the point opposite the mid-heaven) in 634 cases, where chance indicated 524 – the odds being 1 million to one. In the same charts, Jupiter appeared significantly close to the two angles 644 times. And for 1485 athletes, Mars appeared at the significant angles 327 times, against a chance level of 248.

A number of control experiments were carried out to give a base with which to

compare Gauquelin's findings. Groups of horoscopes selected at random gave the results expected according to chance; and further examination of the horoscopes of men in subordinate positions continued to reveal little divergence from the norm. It was only those who were successful in their professions who showed the significant planetary positions in their charts.

Analysing the survey results again, Gauquelin spotted the occurrence of significantly low figures for planetary positions among certain specific groups. The table (above) summarises his analysis of his observations.

Rising or setting	Significant high frequency	Average frequency	Significant low frequency
Mars	scientists doctors athletes executives	politicians actors journalists	writers painters musicians
Jupiter	team athletes soldiers politicians actors journalists playwrights	painters musicians writers	solo athletes scientists doctors
Saturn	scientists doctors	politicians soldiers	actors painters journalists writers
Moon	politicians writers	scientists doctors painters musicians journalists	athletes soldiers

While he was pursuing these enquiries, Gauquelin was also looking out for any correlation with the position of the Sun – in other words, for some proof that the sign of the zodiac under which a person is born also affects their future development. He reported that he could find nothing of any statistical significance – but researchers in the USA and in Great Britain pursued this particular line of enquiry and obtained some interesting results. Because birth times are not generally recorded in these two countries, it was possible to work only with dates of birth, in which case the positions of the planets in the zodiac are known, but not their positions in relation to the ascendant or the mid-heaven.

Astrology and the professionals

In the USA, Edmund van Deusen processed 163,953 birth-dates for individuals born in the States and in Canada. In Great Britain, sociologist Joe Cooper, working with Dr Alan Smithers of the University of Bradford, studied some 35,000 birth-dates. Combining the results obtained by these researchers, we get the following generalisations:

Soldiers: From 16,000 British army officers and 12,000 Americans, it was discovered that a significantly high proportion were born in late summer and early autumn, with peaks appearing in Leo and Scorpio.

Doctors: 6412 British and American doctors show above average figures for birth-dates in summer and autumn; and medical officers in the British army show a marked peaking in Scorpio.

Musicians: From 8932 British and American musicians and composers, an above average proportion were born in Sagittarius, Capricorn, Aquarius and Pisces.

Lawyers: 6677 American lawyers show a peak in Gemini.

Bankers: From 2696 bankers, a significant proportion have birth-dates in Virgo.

Politicians: British politicians show a disproportionate tendency to be born in Aries.

Advertising executives and diplomats: The sample was from 7118 advertising agency men and 1834 diplomats. Both showed Gemini as the favoured sign of the zodiac.

Teachers: Van Deusen found that, of 5056 American school-teachers, a significant proportion were born in Leo or Virgo.

Librarians: 5111 American and Canadian librarians showed a marked trend toward Libra.

Authors: From a sample of 3927 British and American writers, a remarkably high proportion were born in Virgo.

Comedians: Cooper and Smithers found a marked tendency for comedians' birthdays to fall in Aquarius, Pisces, Aries, Taurus or Gemini.

It is important to remember that these statements represent statistical analysis of quite large samples. They are not to be explained away by the fact that the graph of births tends to show a peak in February and a trough in December; this kind of variation is allowed for in the calculations.

At about the same time that these findings were published, three British doctors made

Below: Dr Alan Smithers (left) and Joe Cooper studied data compiled from some 35,000 birth-dates, and obtained some remarkable findings

an analysis of some 28,000 cases of patients born between 1921 and 1955 who were admitted to psychiatric wards in 1970 and 1971. They found that 9 per cent more schizophrenics and 7 per cent more manic depressives had been born during the first three months of the year.

From this plethora of statistical information it begins to emerge that there may be more than a little truth in the suggestion advanced earlier, that a person's future development may (at the very least) be affected by the time of year in which he or she is born. Taken in conjunction with Gauquelin's work, it seems to lend strong support to the belief that the traditional tenets of astrology are founded in some kind of empirical data.

Emotional and neurotic

In 1977 a professional astrologer, Jeff Mayo, and one of Britain's most eminent psychologists, Professor Hans Eysenck, got together to investigate another of astrology's claims: that persons born in Cancer, Scorpio or Pisces tend to be unduly emotional and neurotic. Using a standard personality test that had been introduced by Eysenck in 1964, they found a definite correlation between the odd-numbered birth signs (Aries, Gemini, Leo, Libra, Sagittarius and Aquarius) and a tendency to extrovert behaviour; while the even-numbered signs (Taurus, Cancer, Virgo, Scorpio, Capricorn and Pisces) were associated with introversion. Furthermore, they showed that Cancer, Scorpio and Pisces – and, to Jeff Mayo's considerable surprise, Aries – were statistically linked with emotional and neurotic personalities.

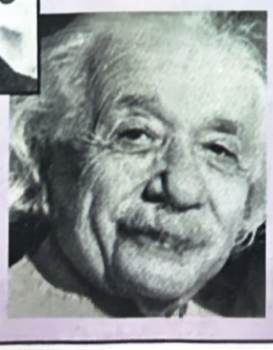
Above: Professor Hans Eysenck, of the Institute of Psychiatry in the University of London, who has publicly declared his growing belief in astrology

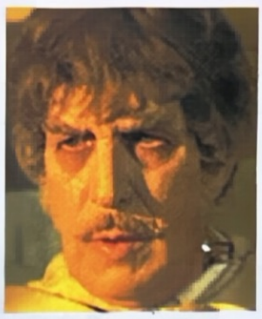
The most recent research seems to have gone even further toward popular beliefs about astrology than professional astrologers themselves would allow. It was pointed out in the first article in this series that astrologers did not accept the idea of 'compatibility' between those born in particular signs. But one of Eysenck's colleagues, Beverley Steffert, has been investigating the connection between Sun signs and happy marriages; and she believes that she has found that such marriages result when the couple involved were both born in either an even-numbered or an odd-numbered sign.

And there, for the moment, the case rests. Astrology is no longer merely a subject for popular columns in cheap newspapers, or for courses run by members of the mystic fringe for bored housewives. It is considered a suitable subject of study for medical men, statisticians and psychologists. Whether the movements of the planets provoke changes in the gravitational or magnetic fields of the solar system, or induce showers of cosmic radiation, and whether one or more of these influences has a profound (and predictable) effect upon the personality of those about to be born, only a great deal more research will reveal. But it seems true that we have underestimated the knowledge of the ancients: the magicians of Babylon knew rather more about the forces of destiny than we have, until now, given them credit for.

Astrological twins

When one looks at those who have achieved some degree of eminence in their professions, it is remarkable how many of them have related birth-dates. Albert Einstein and Otto Hahn (below) were both born on 14 March 1879; operatic tenors Beniamino Gigli and Lauritz Melchior (far right) were both born on 20 March 1890. There are many other examples; Hermann Göring and Alfred Rosenberg, two prominent members of the Nazi party, were born on the same day and died in the same prison on the same day. Even those whose birthdays fall on the same day, but are separated by a year or two, such as Vincent Price and Peter Cushing (centre) have remarkably similar careers.





Knowledge by numbers

Every name, date, place or event can be translated into a number, and every number has a special significance. According to numerologists, these numbers can reveal a wealth of hidden meaning in many aspects of our lives.

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The sum of human knowledge

The ancient art of interpreting numbers answers to a deep-seated human need to find meaning in even the most commonplace things and events. The procedures and theories of the numerologists are simple to learn

The 'Hebrew' numerological system

1	2	3	4	5	6	7	8
A	B	C	D	E	U	O	F
I	K	G	M	H	V	Z	P
Q	R	L	T	N	W		
J		S			X		
Y							

Left: the table most generally used by numerologists to calculate the number corresponding to a particular name or word

Below: a magic square – a number array in which rows, columns and diagonals add up to the same total – is shown behind the gloomy figure in Dürer's engraving *Melencolia I* (1514). Such squares, epitomising the mystical properties of numbers, have often been used as magic talismans

CAN NUMBERS REVEAL the future? Or show the hidden aspects of a person's character? Practitioners of the ancient art of numerology believe they can.

Numerology is a method of making names, dates or events correspond to numbers – generally between one and nine, although sometimes 11 and 22 are included in the system. Each number has a certain significance: William Shakespeare corresponds to five, the number of versatility and resourcefulness.

The correspondence is established by a very simple identification of the letters of the alphabet with numbers according to the 'Hebrew system', as numerologists call it (see table).

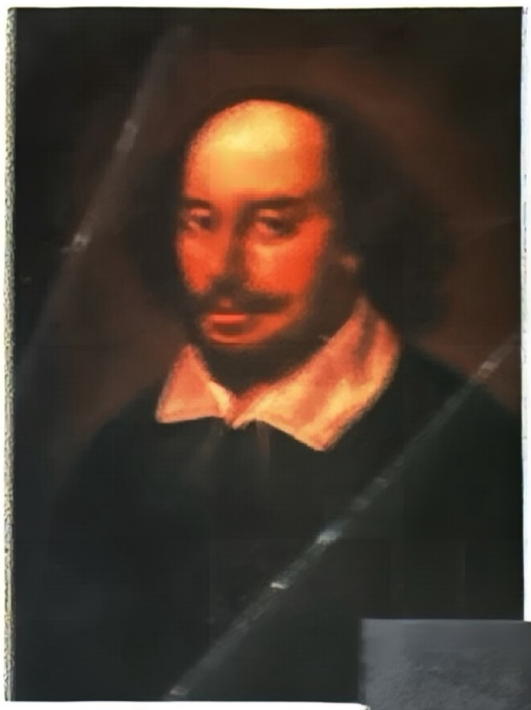
To find your number, simply write down the number corresponding to each letter of your name, and add them together. If the resulting number is over nine, add up its digits and keep doing this until the result is less than 10. For instance, the letters of the name Charlotte Brontë add to five. (Charlotte = 3+5+1+2+3+7+4+4+5 = 34; Brontë = 2+2+7+5+4+5 = 25; 34+25 = 59; 5+9 = 14; 1+4 = 5.)

If the digits corresponding to your name add up to one, you are probably a dominant kind of person, a leader. 'Ones' are pioneers, inventors, designers – but they often put their plans into practice with little regard for the way they will affect the people most directly involved. They tend to dominate everyone they meet, they rarely have close friends and are sometimes, despite their confident appearance, very lonely people.

Two is interpreted by modern numerologists as the number of passive, receptive people. 'Twos' are quiet, unambitious, gentle, kind, tidy and conscientious. They often get their own way, however, by gentle persuasion rather than force. They are inclined to be hesitant, to make problems for themselves by putting off decisions for no good reason, and this quality can lead them into difficult situations.

Three is one of the most extrovert numbers, belonging to intelligent, creative and witty people, who generally make friends easily and seem to succeed at anything to which they turn their hands. They are proud, ambitious and pleasure-loving, but their great weakness lies in their inability to take anything – ideas or people – seriously for very long.

Four, like two, is a number corresponding to dependable, down-to-earth people. They are born organisers. They lack the volatility of 'ones' and 'threes', but they make up for this by their fairness and meticulous attention to detail. They may be subject to sudden



People whose names correspond to five are said to be clever and fast-moving, though fickless. Numerologists find confirmation in eminent people as diverse as Shakespeare (left) whom Coleridge called "our myriad-minded Shakespeare" and Charlotte Brontë (below) who has been described as presenting the condition of women in early 19th-century England with an unprecedented frankness and ardour.

Below: the service of Manhattan at dusk. New York's number is three – representing order, ambition and love of pleasure, but an inability to take ideas and people seriously for long. An apt description of the glittering capital of American finance and fashion!

irrational rages or depressions that seem extraordinary in people who are usually models of calmness. Four has traditionally been regarded by numerologists as the number of ill-luck people whose number is four often seem to pay dearly for any success they achieve in life.

Five is the number of bright, fast-moving, clever, impatient people. They live on their nerves, and love meeting people and seeking out new experiences. They are often physically attractive but rather feckless, hating to be tied down. Five is the number that represents sex, the digits of which also add up to five, and people whose number is five often have varied and exciting love-lives, often problematic. Sometimes the sexual side of their nature shows itself in excesses or perversions.

People whose number is six are among the happiest of the whole numerological system. They are happy, tranquil, well-balanced and home-loving. They are affectionate, loyal, sincere and conscientious. They are not uncreative; many of them are successful in the performing arts. The negative aspect of their character is their tendency to be rather fussy, conceited and self-satisfied.

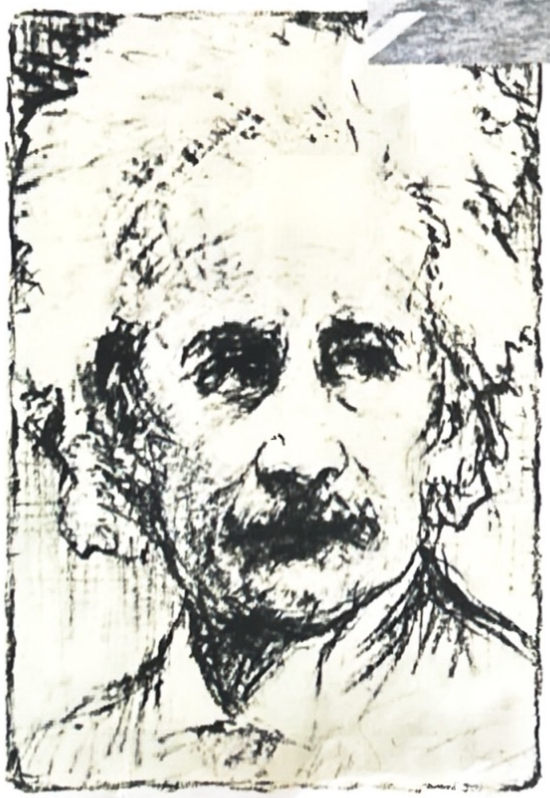
Seven is the number of the loner, the introspective scholar, philosopher, mystic or occultist. These people tend to stand aside from the mainstream of life, content to observe it. They are dignified, self-controlled and reserved. They tend to be indifferent to worldly wealth but, while they may seem aloof and stand-offish, make loyal friends. Despite their powerful intellects, they are often surprisingly bad at putting their thoughts into words, and may even dislike discussing them if they feel their ideas are being challenged.

Eight represents worldly success, and people who have this number often make successful businessmen, politicians or lawyers. Their success is, however, often built on a great deal of hard work, which is often done at considerable expense to their warmer, more human qualities. They often seem to be hard, egocentric and grasping; but there can be, behind the unsympathetic exterior, a whimsical streak that endears them to other people.

Nine stands for the height of intellectual and spiritual achievement. People whose number is nine are the idealists, the romantics, the visionaries – poets, missionaries, doctors, religious teachers, brilliant scientists. Their great qualities are their unselfishness, their self-discipline and their determination. Their idealism is concerned with mankind as a whole – in their everyday lives they may be inclined to seek the limelight, and to be fickle friends or lovers.

Above: King's College, Cambridge. Seven is the number of the city and of philosophers and scholars

Eleven is the number of those with a strong sense of vocation – from leaders such as Churchill (left) to reformers such as Florence Nightingale (far left). Human relationships mean less to them than their ideas: Einstein (below left) called himself a 'lone traveller'. What Picasso (below) was told by his mother could be said of any of them: 'If you become a soldier you'll be a general. If you become a monk you'll end up as the Pope'



Some numerologists also employ the numbers 11 and 22. They believe that these numbers represent a higher plane of experience than the numbers one to nine. Eleven is the number of those who experience revelations and suffer martyrdom; those with names that add up to this number are often people with a strong vocation for their work – preachers, doctors, nurses or teachers. They tend to prefer ideas to real people.

Twenty-two is the 'master' number: people whose names add to 22 combine the best qualities of all the other numbers.

Apply this procedure to the name you were given at birth and you will find, numerologists claim, the characteristics you were born with and that will underlie your personality throughout your life; apply it to the name you apply to yourself, or would like to have, and you will discover how your experiences in the world have moulded your

personality. Using a nickname, you will be able to ascertain what your friends think of you. Comparing her maiden and married names, a married woman can find out how married life has changed her.

The total of vowel numbers in your name is your heart number, which shows your inner character; the total of consonants is your personality number, which indicates your outward personality, or the impression you make on the people around you. (This distinction is derived from Hebrew, in which only the consonants of any word are actually written down; the vowels are therefore 'hidden', and represent the aspects of the personality that are not outwardly apparent.)

Like the character types suggested by the sign of the zodiac you were born under, the traits indicated by these numbers are to be regarded as indicating a general type, not a detailed description. But that people whose names add to the same number share certain personality traits can be supported with numerous examples: the letters of the names Winston S. Churchill, Einstein, Pablo Picasso and Florence Nightingale, for instance, all add to 11 – the number of those with strong vocations.

The same technique can be applied to the names of cities, and many of the results seem to confirm the beliefs of numerologists. London adds up to five, indicating many-sidedness and resilience; New York to three, indicating brilliance and glitter. The ancient cities of Oxford and Cambridge both have the number seven – the number of the aloof, inward-turned scholar.

The 1920s (top), the third decade of the century, had the number three – the number of the pleasure-loving and fickle. The 1930s (centre) corresponded to four, representing unstable moods and ill-luck; the decade began with the Depression (a Christmas Day dole queue is shown here) and ended with the Second World War. After VE Day (above), the 1940s saw the return of prosperity and renewed experiment in fashions and life-styles – in character with the decade's number, five ('bright, clever, impatient')

But the ridiculous extremes to which numerology can be taken are indicated by the prediction of an American numerologist that, since Oakland, California, shares the number nine with Chicago, it will one day suffer a great fire, as did Chicago in 1871.

Numerology extends to the character of a year, a decade or a century. The present century carries the number one ($1+9+0+0=10$; $1+0=1$) and, according to numerologists, should be an ebullient time of invention and discovery, dominance and subjugation. All of this could be said to be true, although here lies the weakness of the loose collection of attributes associated with each number: it could be regarded as equally true of the 19th century.

The year 1979 was characterised by the number eight ($1+9+7+9=26$; $2-6=8$). According to numerologists, it should have been a year when financial and political matters went exceptionally well. The 1980s are the ninth decade and should be characterised by nine, with great achievements in the arts and the world of learning.

Past decades are depicted by numerologists as confirming their theories: the brilliant 1920s, a 3-decade, followed by the more subdued 1930s, overshadowed in its latter half by the threat of war; the recovery of confidence of the 1940s and the self-assurance of the 6-decade of the 1950s; the

dreaming withdrawal into mysticism of the 1960s, characterised by the number seven, and the hardening up of attitudes in the money-conscious 1970s, reflected in its number, eight. But this appropriateness is in the eye of the beholder: for example, some might view the 1950s, which saw the appearance of the H-bomb and rock'n'roll, and the intensification of the cold war, as badly represented by six (happy, tranquil, balanced).

Numerologists believe that numbers can be used to suggest beneficial courses of action. If your number is seven, for example, you should take care to make difficult decisions or perform important tasks on days of the month that add up to seven: the seventh, the 16th and the 25th. People whose names add up to eight should eat plenty of oranges, since the word 'oranges' adds up to eight – but presumably never a single orange at a time! Certain years, too, can be good or bad for an individual; to find your year-number, add your month and date of birth to the *current* year: 1981, for instance, was a 9-year for someone born on 24 February 1956 ($24+2+1981=2007$; $2+0+0+7=9$), indicating it is a year of high spiritual and intellectual achievement.

The 1950s (top) seem poorly characterised by their number, six (happy and well-balanced). But seven (the mystic and occult) seems appropriate to the 1960s, the hippy decade (above). And eight, the number of businessmen, politicians and lawyers, seems to suit the 1970s, the decade of oil crises (below)

Why should the numerological system work? Numerologists are quick to point out instances that seem to show the importance of number, such as the career of Louis XIV of France. He came to the throne in 1643, which adds up to 14; he died in 1715, which adds up to 14, at the age of 77 – which adds up to 14. But is this any more than coincidence?

Numerologists counter this question by claiming that there is no such thing as coincidence. They believe the Universe is like a vast harp with countless strings, each vibrating at a certain rate, characterised by a number. Number, they believe, is at the root of all things and they point out that science has found that light, sound, atomic structure and many other things are dependent on frequency, or number. But what of the objection that, even if this view of the Universe is correct, basing the system on a person's name must be wrong, since the naming of a child is largely a matter of the personal tastes and whims of the parents? The numerologists have their answers ready; as Florence Campbell, an American, explains:

> The Soul has taken many journeys in the past and *knows* its present needs. The Soul wants progress upwards on the Great Spiral and *chooses* for the incarnating ego the vowels whose total shall accomplish this purpose. . . . There is a long 'Dark Cycle' before the child is born, and during this Dark Cycle the vibrations that are to label the new life are so impressed upon the subconscious minds of the parents that they are compelled to carry out the plan.

In other words, the numerologist believes that the name each person carries is no accident, and that it tells something significant about its bearer, in a code to which the numerologist has the key.

The thought that counts

Ancient philosophers were enthralled by the mathematical relationships they found in nature, and believed that numbers underlay every aspect of reality. As a result of this belief, certain numbers acquired their own symbolic 'personality'

THE MOST FUNDAMENTAL arithmetical operation is tallying: the matching, one for one, of one set of objects with another – or with marks in the dust, or pebbles, or knots in a string – in order to compare quantities. The next step is to give names to numbers and to match objects against *these* in sequence – that is, to count. Some peoples, such as certain New Guineans and Brazilian Indians, have no names for numbers beyond three. And the number words that do exist may vary according to the type of object being counted. (This survives in modern English: we speak of a brace of gamebirds, pistols or dogs, but of nothing else.) It must have been a magical moment when the abstract nature of number was realised: the idea that three trees, three people, or even a collection of three different things all had one thing in common: their 'threeness'.

The power of this abstract idea must have been apparent very early. Number seemed somehow to underlie reality: all collections of three objects were united by their 'threeness'. At a very deep level, perhaps they were the *same*. It is small wonder that the mysterious power of the concept of number inspired a powerful tradition of mystical thought that still colours the way we think about numbers. The tradition comes to us from the medieval Christian Church, which in turn drew its inspiration from two major intellectual traditions, Greek Pythagoreanism and Hebrew *gematria*.

Above: the Beast from the sea described in chapter 13 of the book of Revelation, as portrayed in a German altarpiece of about 1400. The meaning of the Beast's 7 heads, 10 horns and 10 crowns, and of its number, 666, has been the subject of much speculation by number mystics. They have variously interpreted the Beast as representing Rome, the emperor Nero, and even Napoleon Bonaparte

Left: Pythagoras and a disciple experiment with musical tones. The size of a bell or the amount of water in a cup determines the pitch of the note each produces. The discovery by Pythagoras that simple numerical ratios between these quantities correspond to harmony or discord between notes fed his belief that 'all is number'

The school of Pythagoras was a religious community founded by the semi-legendary figure of Pythagoras in the Greek colony of Croton, in southern Italy, around 530 BC. It was dedicated to the study of geometry, mathematics and astronomy, and to experimentation in music. The Pythagorean school studied the variations in pitch produced by vibrating strings of varying lengths, and is credited with the discovery that musical intervals may be represented in terms of simple ratios of whole numbers.

It may have been the discovery of the mathematical nature of musical intervals that gave the Pythagoreans their idea that number was the key to the Universe. Whatever the origin of the belief, they clung to it fervently and bequeathed it to the West.

Like all Greeks, they thought of number geometrically. One was a point, two a line, three a triangle, the first plane figure, and four a tetrahedron (which resembles a pyramid, but has a triangular base), the first solid figure. These four numbers between them thus describe the whole of space. The Pythagoreans venerated them in a symmetrical pattern called the *tetractys*, and believed it was 'eternal nature's fountain spring'.

Number pervaded the Pythagoreans' entire cosmology. Creation was seen as the division of primordial unity into parts. Each number had a certain significance attached to it; broadly, the Pythagoreans believed that the world was composed of a series of ten pairs of opposites corresponding to oddness or evenness in numbers – limited/unlimited, right/left, male/female, and so on.

In Hebrew, as in Greek, numbers were represented by letters of the alphabet, and this may well have stimulated *gematria*, the Jewish art of turning names into numbers. This was done simply by totalling the numbers that the letters stood for. The central idea of *gematria* was that things referred to by words whose letters added up to the same number were somehow the same; number expressed their true essence.

This technique was applied, for example, to the story told in Genesis 18: Abraham was sitting at the door of his tent in the plains of Mamre 'and lo, three men stood by him'. The Hebrew for 'and lo, three men' adds, by *gematria*, to 701 – and so do the words 'these are Michael, Gabriel and Raphael'. The obvious conclusion was that the three 'men' were actually archangels.

It was natural for early Christians to take up the numerological ideas of the two dominant intellectual traditions – Greek and Jewish – that surrounded them. The early symbol of the dove for Christ, for example, was probably adopted because the Greek letters alpha and omega – 'I am Alpha and Omega, the beginning and the ending, saith the Lord' (Revelation 1:8) – add to 801, the number of *peristera*, the Greek for 'dove'.

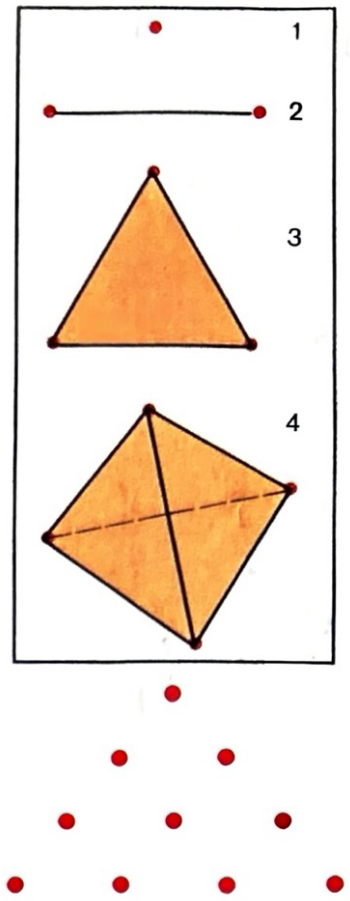
For the Christians, as for the Pythagoreans, goodness and maleness were associated with the odd numbers. One stands for perfection, unity, God. Two, as the first number to break away from that perfection, represents the Devil. And since odd numbers dominate in addition (odd + even = odd), and addition represents sexual union, odd numbers must represent the male sex.

The Bible, early Christian theologians believed, provided confirmation of the evil associated with two. For in the account of the Creation, did not God neglect on the second day to find that his work was good? And before the Flood, the unclean animals went into Noah's ark two by two, whereas the clean animals went in by sevens.

Modern numerologists are more generous to the number two, preferring to emphasise its positive qualities, but it nonetheless remains the least favoured of the numbers (see page 75).

Three is the first male number. One by itself, although perfect, is barren; two introduces a discord that can only be resolved by adding the two numbers together to make three. It is this symbolism that is behind the Christian doctrine of the Trinity; as the 19th-century French magician Eliphas Levi put it:

> Were God only one, He would never be creator or father. Were He two, there would be antagonism or division in the infinite, which would mean the division also, or death, of all possible things. He is therefore three for the creation by Himself and in His image of the infinite multitude of beings and numbers.



Top: to the Greeks, the number one corresponded to a point, and two to a line; three points defined a triangle, the simplest plane figure; four points defined a tetrahedron, the simplest space-occupying form. The Pythagorean *tetractys* (above) was composed of one, two, three and four dots arranged in rows

Below: in Hebrew, numbers are represented by letters. To write 456 the letters for 400, 50 and 6 would be written together

Hebrew numerals

1	2	3	4	5	6	7	8	9
א	ב	ג	ד	ה	ו	ז	ח	ט
10	**20**	**30**	**40**	**50**	**60**	**70**	**80**	**90**
י	כ	ל	מ	נ	ס	ע	פ	צ
100	**200**	**300**	**400**	**500**	**600**	**700**	**800**	**900**
ק	ר	ש	ת	ך	ם	ן	ף	ץ

The number of ill-luck

Four is the Pythagorean number of solid earth, being the number of points required to define a tetrahedron. It may be solid and uninspiring, but as Plutarch put it, writing around the turn of the first century AD, 'Those who exalt Four teach us a lesson that is not without value, that by reason of this number all solids came into being.' But four is also the number of evil and ill-luck, being made up of two twos, in two different ways ($4 = 2 + 2 = 2 \times 2$).

Five, on the other hand, is the number of male sexuality: it is made up of two and three: the first feminine number added to the first masculine number. Thus, in love, woman is given to man – and man 'naturally' dominates.

Six is the first 'perfect' number – it is the sum of its factors (numbers that divide it without remainder). Thus $6 = 1 + 2 + 3$. Perfect numbers were venerated for their tranquillity and harmoniousness. In ancient times only the first four perfect numbers were known: 6, 28, 496 and 8128. The next one – 33,550,336 – was apparently not discovered until the mid 15th century.

Seven is a number rich in biblical associations. There are seven deadly sins, seven Christian virtues, seven petitions in the Lord's prayer; on the seventh day of the siege of Jericho, Joshua marched seven times

Pyramids and prophecies

One of the more eccentric manifestations of mankind's fascination with number symbolism is pyramidology. One pyramidologist in particular, an American named Worth Smith, claimed that the Grand Gallery of the Great Pyramid of Cheops (right) enshrined a complete history of the Christian Church, with particular emphasis on Britain's history. (He believed the pyramid was built by ancestors of the British.)

He believed that the point at which the Grand Gallery begins represents Christ's birth on 6 October in the year 4 BC. Each inch (2.5 centimetres) represents a year. For the first 400 inches (10 metres) the stones are smooth; then they suddenly become scarred and broken. This, Smith claimed, represented the first 400 years of the Church's existence, a reasonably peaceful period that ended with the invasion by the Visigoths.

The prophetic insight of the Egyptian builders – or their lack of engineering skill – is demonstrated by another badly surfaced stretch: this, according to Smith, represents the rise of Islam from 622 (Mohammed's flight from Mecca) to an important defeat in Europe in 732.

At the point supposedly corresponding to 1844 the gallery ends in the Great Step, which is 3 feet (1 metre) high. This should represent some kind of improvement in the fortunes of Christendom, but Smith is forced to admit that there was no great advance in 1844. He theorises rather lamely that 'almost the whole lot of the discoveries and inventions in common usage have come into existence since the year 1844.'

According to Smith the scale now changes so that one inch represents a month. A new tunnel, the Low Passage, supposedly begins on 4 August 1914, the date of Britain's entry into the First World War, and ends on 9 November, date of the Kaiser's abdication. Smith expected the current year – 1936 – to see the dethronement of Satan himself.

Right: the Devil tempts Jesus, in a 12th-century painting from the ceiling of a Swiss church. The time that Jesus spent in the wilderness being tempted by the Devil was 40 days and 40 nights – a period that occurs often in the myth and folklore of all countries

Left: the Trinity, painted by El Greco in about 1600. God the Father cradles Jesus, his son, while the Holy Spirit, in the form of a dove, hovers above. The difficult notion of the three-in-one God is not explicitly stated in the Bible, but was formulated by theologians to reconcile various conceptions of God scattered through the Old and New Testaments. To numerologists, God could not be single, since he would then be uncreative; nor twofold, since this is the nature of antagonism and conflict

round the walls of the city and flattened them with a blast from seven trumpets; and Pharaoh's dream, which Joseph interpreted, involved seven fat and seven lean cows, seven plump ears of corn and seven blighted ones. In folklore, too, mystery attaches to the number seven; magical properties are attributed to seventh sons and seventh sons of seventh sons. The power of the number seven stretches far back in time: around 2500 BC the great Sumerian king Lugulannemund built a temple in the city of Adab to the goddess Nintu, with seven gates and seven doors, purified with the sacrifice of seven times seven fatted oxen and sheep. One can only guess at the significance of this frequent use of the number – but it seems that it is linked with the phases of the Moon, which take about 28 ($=4\times7$) days to go through a complete cycle. The ancients believed that the cycles of birth and death, growth and decay, depend on the waxing and waning of the Moon.

The symbolism of the numbers eight and

nine is connected with human procreation: a woman's body has eight orifices, the eighth being the one through which new life enters the world. Eight is thus the number of worldly success. Nine is the number of completeness because a human child is conceived, formed and born in nine months.

A few numbers greater than nine were regarded as having a special significance. Twelve, for instance, is a number of completeness: there are 12 months in the year, 12 signs of the zodiac, and 12 tribes of Israel plus, of course, 12 disciples. Thirteen is a number of excess – it goes one beyond a number of completeness. The fact that there were 13 people at the Last Supper strengthens the uneasiness many people still feel about the number. This feeling is so strong that, for instance, when Queen Elizabeth II visited West Germany in 1965, the number of the platform at Duisburg station from which her train left was changed from 13 to 12a.

One more number with ancient sacred and mystical connections is 40. The rain that caused the Flood in Genesis continued for 40 days and 40 nights; this is also the time that Moses spent on Mount Sinai, speaking with God. The children of Israel walked 40 years in the wilderness, and Jesus was tempted by the Devil for 40 days and 40 nights. Forty has been sacred since ancient Babylonian times, when it was known as *kissatum*, 'the excellent quality'. The Greek poet Hesiod, writing in the eighth century BC, explains that 40 days is the period for which the star cluster called the Pleiades disappears. These stars are of widespread importance: ancient authors state that autumn sowing should be performed when the Pleiades set at dawn, and some peoples use them to mark the passage of a year. The 40-day disappearance of the Pleiades may also have started the habit of measuring periods of time of agricultural significance in 40-day periods – as in the belief that a fine St Swithin's day (15 July) will be followed by 40 days of good weather, while a rainy one presages 40 days of rain.

Armed with these interpretations of numbers, the Christian theologian had at his fingertips a powerful tool for unravelling the hidden meaning of any biblical text. The crowning glory of biblical number symbolism is the book of Revelation. Written in 22 chapters – the 'master' number, the number of things traditionally supposed to have been created by God, the number of letters in the Hebrew alphabet – it is full of numerological puzzles. The greatest and most famous of these is the puzzle of the number of the Beast, 666:

> And I stood upon the sand of the sea, and saw a beast rise up out of the sea, having seven heads and ten horns, and upon his horns ten crowns, and upon his heads the name of blasphemy. . . . And I saw one of his heads as it were wounded to death; and his deadly wound was healed: and all the world wondered after the beast. . . . Let him that hath understanding count the number of the beast: for it is the number of a man; and his number is Six hundred threescore and six.

Below. 13 people are present at the Last Supper: Jesus and the 12 disciples, of whom one, Judas Iscariot, turns away in shame. This scene, familiar to all Christians, strengthened the superstitions that surrounded the number 13

Bottom. 'The Great Beast' is the inscription in Greek on the medallion worn by the magician Aleister Crowley in this self-portrait. Crowley adopted the mysterious number ascribed to the Beast in the book of Revelation: 'six hundred threescore and six'

The identity of the Beast

There have been many conjectures as to the identity of the Beast. It is now generally accepted that the Beast is meant to stand for the Roman empire, and the seven heads for seven emperors. The head wounded to death and then healed could represent Nero; he was murdered in AD 68, but there were persistent rumours that he lived on. Nero, in Hebrew, adds up to 666 – but only if spelt with an extra N. Otherwise it adds up to 616 – and some early manuscripts do, indeed, give the number of the Beast as 616. The 'image of the Beast' of chapter 15 may represent Caligula, who in AD 30 had set up a statue of himself in the Holy of Holies in Jerusalem, and gave the order that the Jews were to worship it (although he died before the command could be enforced). Gaius Caligula Caesar in Hebrew adds to 616, as does Gaios Kaisar in Greek.

Numerologists, however, have not been content with these simple explanations, and speculations as to the Beast's identity have ranged far and wide. In the early 19th century there was an attempt to make Napoleon into the Beast. Thomas Macaulay, the English statesman, refused to accept this hypothesis; with typically mordant wit, he announced that the House of Commons was obviously the Beast: it had 658 members, three clerks, a serjeant and a deputy, a doorkeeper, a chaplain and a librarian – making 666 in all. The magician Aleister Crowley believed *himself* to be the Beast; he had, he claimed, discovered his true identity while still a boy, with 'a passionately ecstatic sense of identity'. He signed himself 'The Beast 666' – or sometimes *To mega therion*, which means 'the great Beast' in Greek. Its number is 666.

Numbered among the great

Number lies behind scientific theory, ideas of artistic proportion and rules of musical harmony. Artists and scientists have used the meaning of numbers in their work

THE BELIEF THAT NUMBER is the key to the secrets of the Universe – a belief verging on the mystical – lay at the heart of many arts and branches of learning up to, and even after, the scientific revolution of the 17th century. It was the inspiration for some of their most spectacular achievements. Diverse disciplines were brought together by the common language of number: music, astronomy, architecture, poetry and theology reflected the *harmonia mundi*, the harmony of the world, by means of number.

Number was in everything; a typical expression of this idea is St Augustine's remark on dancing:

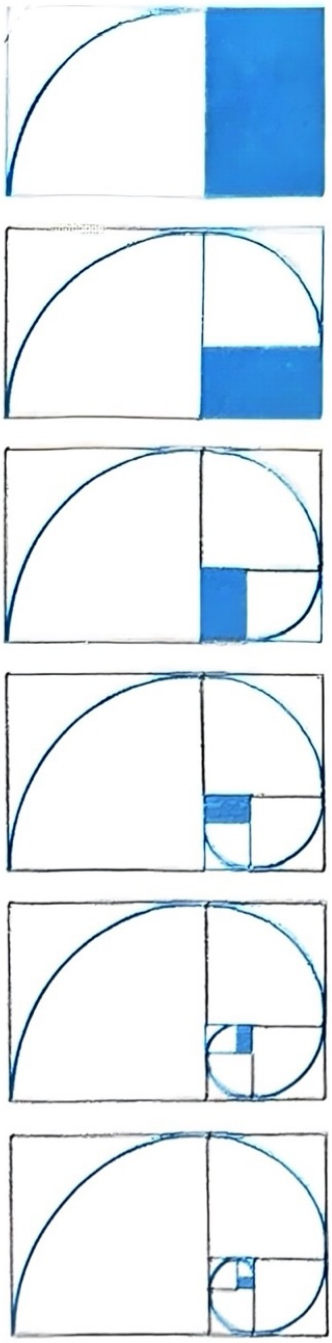
> Ask what delights you in dancing and number will reply, 'Lo, here am I!' Examine the beauty of bodily form, and you will find that everything is in its place by number. Examine the beauty of bodily motion, and you will find everything in its due time by number.

Number was the essence of the *harmonia mundi*. And so the way to create a perfect work of art was to use number in the correct way. This belief can be traced to Plato, who states in his philosophical dialogue *Philebus*: 'The qualities of measure and proportion invariably . . . constitute beauty and elegance.' The architect Leon Battista Alberti, writing in the mid 15th century, echoes the idea:

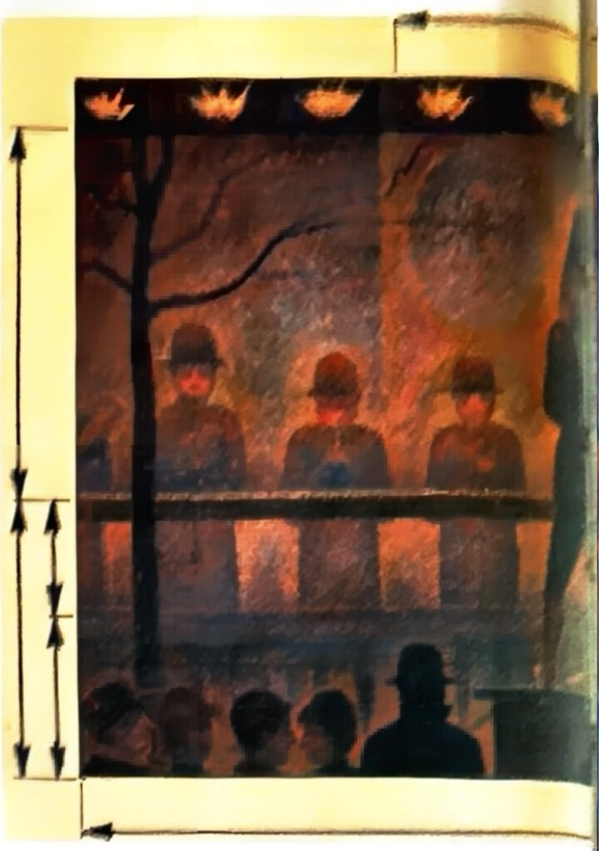
> Nature is sure to act consistently, and with a constant Analogy in all her operations: from whence I conclude, that the same Numbers, by means of which the Agreement of Sounds affects our ears with delight, are the very same which please our eyes and minds.

The large number of handbooks on architectural proportion that appeared during the Renaissance are testimony to the seriousness with which this idea was regarded. And in the 20th century a major attempt at constructing a harmonious system of design by proportion was made by the great architect Le Corbusier.

Called the Modulor, Corbusier's system was based on the golden section, a ratio



Above: cutting a square from a rectangle with sides in the ratio of the golden section (1.618) leaves a smaller 'golden' rectangle. Repeated, this creates a Fibonacci spiral, which is common in nature (below)

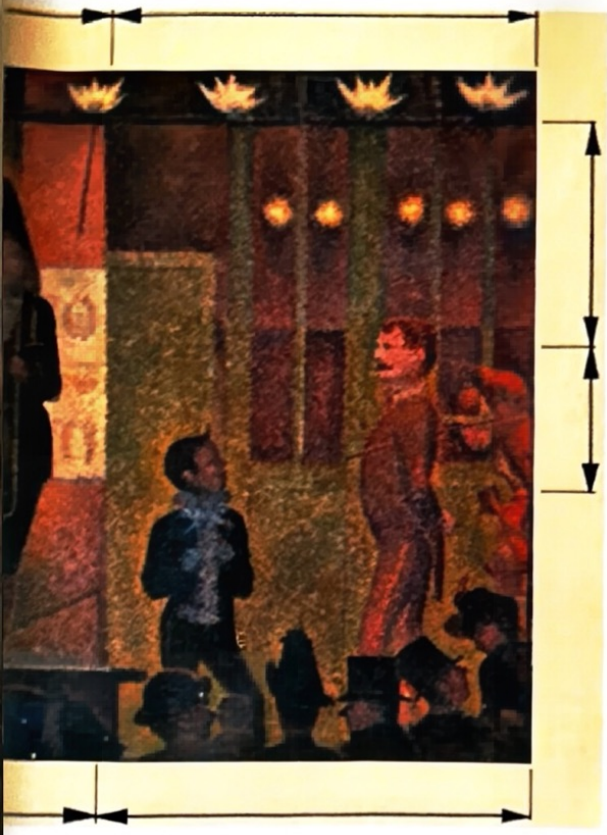


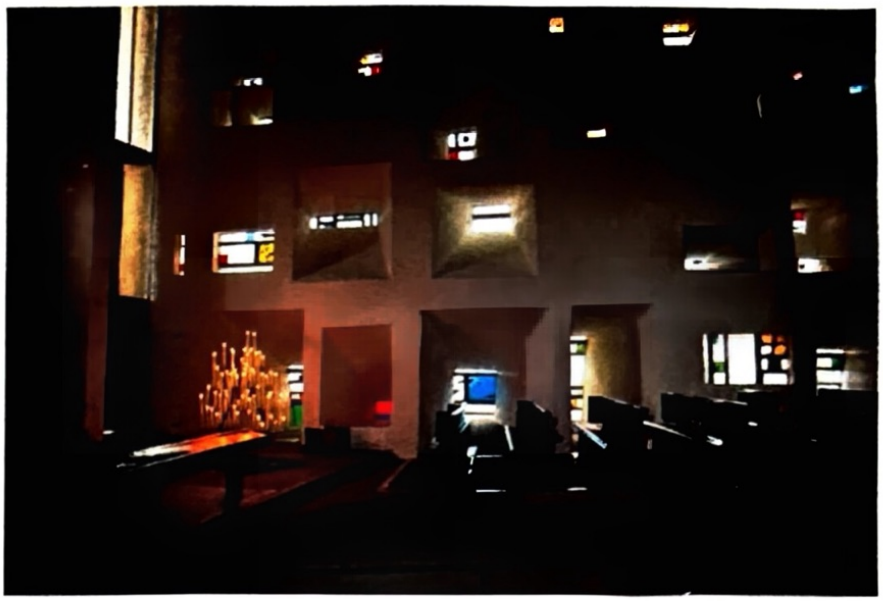
regarded since ancient times as especially pleasing. If a line is divided into unequal parts in such a way that the ratio of the whole to the longer part equals the ratio of the longer part to the shorter, the line is said to be divided in golden section. This ratio is called by the Greek letter 'phi'. It is approximately equal to 1.618. If this number is repeatedly multiplied by itself, a series of numbers is formed, every member of which (after the first two) is equal to the sum of the preceding two numbers.

A simpler example of such a series – they are called Fibonacci series after Leonardo Fibonacci, a mathematician who worked in Pisa about 1200 – is the sequence: 1, 2, 3, 5, 8. . . . Fibonacci series are found in the proportions and ratios of many natural patterns: the pads on a cat's foot, the arrangement of leaves on a plant, the spirals of a snail's shell.

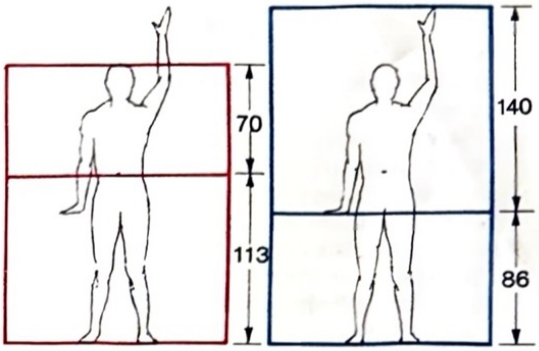
Building by numbers

Corbusier claimed that the proportions of ideal human figures embodied the golden section, and that buildings designed in accordance with it would be both beautiful and well-adapted to human needs. He designed several buildings using the Fibonacci series, based on the figure of a man 6 feet (1.8 metres) tall. He even believed that his system had reconciled the metric and imperial systems of units. The buildings based on the Modulor include the chapel at Ronchamp, in France, blocks of flats in many famous cities, and the administrative centre at Chandigarh.

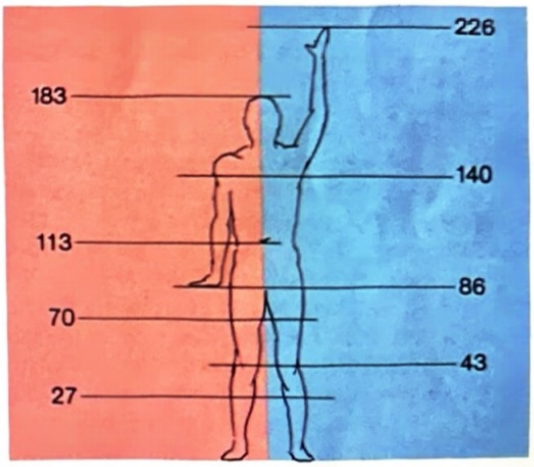




Left: a rare instance of a painting deliberately designed using the golden section: *The parade*, by Seurat. The ratios of the dimensions indicated are all approximately 1.618:1



The golden section, which fascinated Le Corbusier, occurs repeatedly in the windows and recesses of his chapel at Ronchamp (above). His Modulor system was based on a man 6 feet (183 centimetres) tall. In the 'red' series this height is divided in golden section by the height of the navel. The 'blue' series is based on the height of the raised hand, above the ground and above the groin. Dividing these distances (shown here in centimetres) by the golden section extends the two series (right), which are related to basic human postures (below)



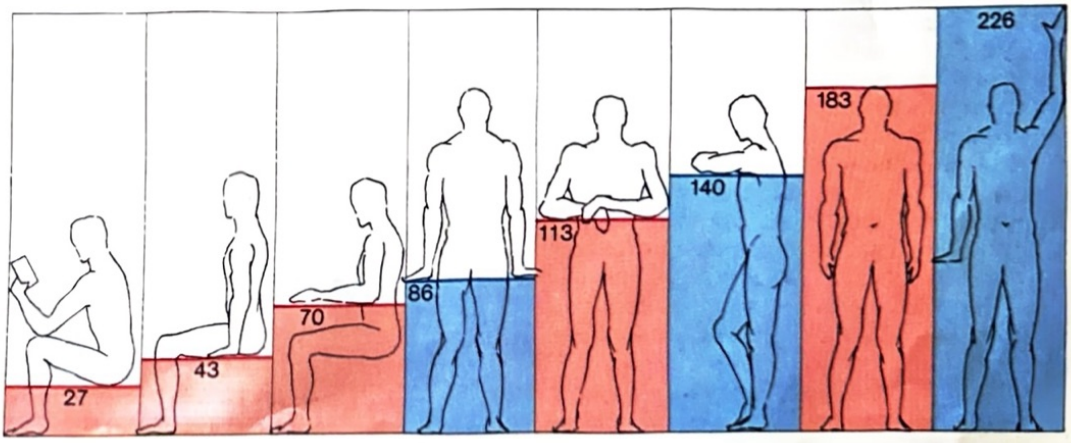
in the Punjab.

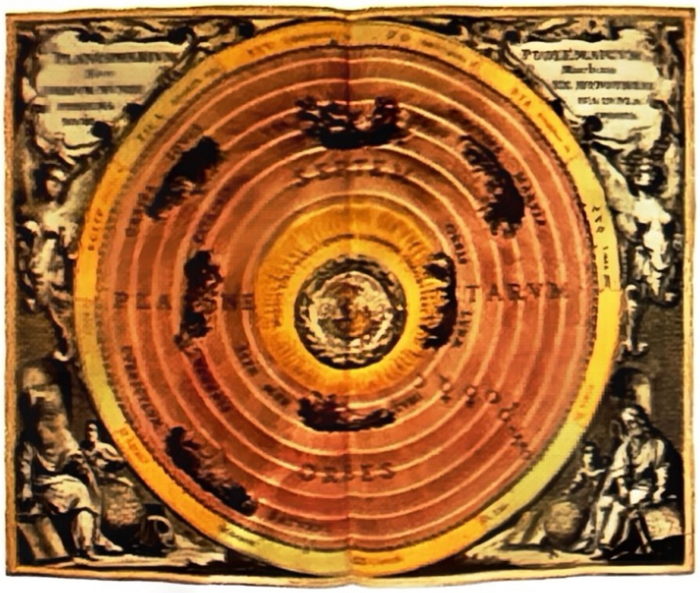
Are these buildings more beautiful than others not constructed on any particular system of proportion? The question is almost impossible to answer, since the buildings named are the work of a great architect and, as such, are likely to be better than those of an indifferent architect, whether designed according to a system or not.

It is even doubtful that the golden section leads to more beautiful proportions than any other ratio. A rectangle with length and breadth in the ratio of the golden section has long been regarded as in some sense ideal. Yet as long ago as 1876 it was found by experiment that, although subjects preferred golden-section rectangles in the laboratory (35 per cent chose them when offered a choice of 10 rectangles), a much shorter rectangle was preferred for pictures in a

Le Corbusier believed that the dimensions of his Modulor series were as convenient to use in imperial units as in metric

centimetres	inches
226	89
183	72
140	55
113	44½
86	34
70	27½
43	17
27	10½





Above: the transition from an Earth-centred view of the Universe (left) to a Sun-centred view (right) was made largely on grounds of mathematical elegance and harmony. The ancient system worked well (despite the dejected appearance of the ancient astronomers depicted at the foot of this map, drawn in 1660). Yet many of the most able scientists accepted the arguments of Copernicus for the mathematically simpler Sun-centred system, even before telescopic evidence supported the theory.

gallery – 5:4 for upright shapes, 4:3 for horizontal. If it were the case that certain proportions were preferred, then, as the architectural writer P. H. Scholfield points out:

> One would expect the same types of relationships to have appeared spontaneously in all periods of good design. In fact, this is not the case, and the sorts of mathematical relationships which occur are closely related to the mathematical knowledge of the period.

What role is played by number relationships in science? The idea that there was an underlying numerical harmony in the world made it natural for the ancients to seek scientific explanations in terms of number. Reasoning of this sort led them to think that God must have made the world in six days because six is the first 'perfect' number – a number equal to the sum of its factors, as we have seen.

Today it seems that such an argument has no validity whatever. Yet it is undeniable that important discoveries have been made when numerical patterns have been noticed in natural phenomena, even if explanations for those patterns were still unknown.

An example is the Titius-Bode 'law', which led to the discovery of the asteroids. It was noticed that the relative distances of the planets from the Sun fall roughly into a sequence of numbers generated by a simple rule. But there is a gap in the series as set out, between Mars and Jupiter. It was argued that there should be a planet at the corresponding position. A search was therefore made, and an object was indeed found there. It was not a planet but the first known asteroid – a small rocky body, one of thousands of these that are now known.

Another example of scientific discovery guided by numerical patterns comes from chemistry. In the 19th century the Russian chemist Dmitri Mendeleev noticed that when the elements are listed in order of their atomic weights (which are, literally, the relative weights of their atoms), patterns emerge: the list can be arranged in rows and columns so that the chemical properties change systematically along the rows and down the columns. To make this system work, it was sometimes necessary to revise the atomic weights assigned to certain elements, or to suppose that there were gaps, corresponding to as yet undiscovered elements. Subsequent discoveries vindicated Mendeleev's ideas triumphantly. All known elements fit neatly into this 'periodic' table, and modern knowledge of atomic structure explains why these patterns should exist.

Below: Dmitri Mendeleev, the Russian chemist whose classification of the elements on the basis of their atomic weights underlies modern chemistry.

The modern view

The modern attitude to such numerical relationships among phenomena, empirically found, is very different from that which was prevalent as late as the 18th century. We see them as the inevitable product of relatively simple physical laws: ancient philosophers and scientists, not knowing their explanations, saw every such instance of regularity as another proof of the harmonious and beautiful design of the world.

The desire to see the world as a place ruled by harmony and governed by number may seem naïve today, but it is an expression of the perennial tendency – and desire – of human beings to see order and pattern in everything around them. Number may not be everything, but the unprovable assumption that nature is rational and intelligible is the basis of science – and of the practical reasoning of everyday life.

A radical attempt to account for this intelligibility of the Universe was made by the German philosopher Immanuel Kant in the 18th century. He saw the source of the orderliness of the world as being the human mind itself, and the concepts with which it does its thinking. He went so far as to say: 'Our intellect does not draw its laws from nature . . . but imposes them on nature.'

Cause and effect, time and space, the laws of mathematics and logic, are the result of the constitution of our minds.

Sir Arthur Eddington, an English astronomer, pushed a form of this idea even further in the early 20th century. He believed that many highly detailed facts about the Universe – namely, the value of certain numerical constants – could be calculated without any appeal to experiment or observation, but by pure mathematics alone.

But very few scientists and philosophers have accepted this view. The specific features of the Universe are not to be explained by reference to the structure of the human mind: and only experience can show which theories are actually true of the world. It is therefore highly remarkable that the Universe should prove to obey laws that are in fact simple, and harmonious.

Even more remarkable: nature has (so far) proved to be not only intelligible by rational laws but intelligible in a way that is frequently elegant and even beautiful. When Copernicus put forward his idea that the Earth revolved around the Sun, rather than vice versa, it was not so much the experimental evidence as the theory's elegance, or aesthetic appeal, that was persuasive to contemporary thinkers.

Similarly, Einstein developed the theory of relativity on the premise that 'absolute' motion does not exist; that is, there can be no justification for saying that, of two scientific observers moving relatively to each other, one is 'really' at rest and the other is not. There is no absolute standard of rest in the Universe. Einstein was very little influenced by the problems raised by such experiments as that of American physicists Michelson and Morley. The elegance and intrinsic power of the theory played a large part in the theory's quick acceptance and the conviction of scientists that it *must* be true.

Above: Immanuel Kant believed the mathematical regularities of the world to be, in some sense, created by the human mind

That the laws of nature should be not only rational but elegant seems almost too much to expect. Yet this astonishing metaphysical hypothesis is constantly being borne out by science. Time and again physical reality is found to coincide with the speculations of scientists, evolved from a few basic facts and couched in the subtle language of mathematics. The existence of many subatomic particles has been suggested by 'gaps' in mathematical patterns somewhat analogous to Mendeleev's table of the elements. The branch of mathematics responsible for these achievements, called 'group theory', was evolved between the World Wars as a part of purely abstract algebra; yet it seemed tailor-made for the understanding of particles that were to be discovered decades later.

In view of these amazing anticipations of experimental results by the mathematical speculations of theoretical physicists, how does modern science differ from numerology? It differs in that it makes no assumptions about the symbolic meaning of numbers: numbers do not give insight into some divine master plan of the Universe. But the assumption on which science rests – that nature is regular and comprehensible by human reason – is every bit as mystical as the idea that 'number is all'.

Music of the spheres

The work of the great astronomer Johannes Kepler (1571–1630) shows a curious fusion of numerological and scientific thought. It was Kepler who formulated the extraordinarily elegant laws that govern planetary motion. This man, one of the first great modern scientists, was also a profound mystic.

Like Pythagoras and Plato, Kepler believed that the world was ruled by number. He tried hard to prove that the distances of the planets from the Sun were given by an arrangement of Euclid's five regular solids (left); by doing so, he believed, he could demonstrate something of the order of the mind of God. But his faith in number went further: he believed that musical harmony, mathematically expressed, and the harmony of the spheres were one and the same thing: 'I affirm and demonstrate that the movements [of the planets] are modulated according to harmonic proportions.'

Kepler could not resist pushing his theory further. Each planet, he believed, sings a characteristic tune – and, by a calculation involving the angle it describes in a day, as seen from the Sun, he was able to work out what the tune for each planet was. The Earth sings a simple little ditty – mi fa mi – indicating, Kepler asserted, that 'in this our domicile *mi*sery and *fa*mine obtain.'

A glimpse of the future

One of man's most persistent searches is for the means to see into the future. Is precognition possible, and if it is, does the ability to see the future allow us to change it?

The pattern of the future

How does one distinguish between prediction and prophecy? Can the concept of free will accommodate predestination? This chapter takes a look at the principal methods of divination, and begins with the ancient, but still flourishing, art of geomancy

'How now you secret, black and midnight hags!' Macbeth and Banquo encounter the Weird Sisters on a heath near Forres. The witches' prophecies were to change Macbeth's life, but they predicted nothing that did not remain in his control

THROUGHOUT THE HISTORY of mankind, those who were concerned about what the future held for them have sought guidance from 'wise' men and women. From the Azande tribesman who offers a chicken to the witch doctor in return for a prognostication of next month's weather, to the investor consulting his astrologer for assistance in forecasting future movements of the stock market, the motives, the means and the advice have always been very similar. But for all those prepared to *prophesy*, few would be prepared to say that they could *predict*.

The dangers inherent in placing too exact an interpretation on prophecy are exemplified very neatly in Shakespeare's *Macbeth*. Macbeth has – as the historian A. L. Rowse very rightly puts it – 'a flawed and ruined nobility – he is the victim of the Weird Sisters' prophecies; or, rather, of the promptings to which their "prophecies" gave confirmation.' In other words, Macbeth is given information that he interprets in one way; but subsequent events show that an entirely different, and equally plausible, interpretation could have been made.

When Macbeth first meets the witches, they hail him as thane of Cawdor, and as 'Macbeth, that shalt be king hereafter'. They also greet Banquo:

First Witch: Lesser than Macbeth, and greater.

Second Witch: Not so happy, yet much happier.

Third Witch: Thou shalt get kings, though thou be none.

Within minutes, Macbeth is named thane of Cawdor, and so, driven by ambition and the conviction that the witches have foretold his future, he murders King Duncan and himself becomes king of Scotland. Then, fearing that the rest of the witches' prophecy will also come true, he engineers the murder of Banquo – but Banquo's son Fleance escapes, and will sire a line of later kings.

But Macbeth must have more:
I will tomorrow,
And betimes I will, to the weird sisters:
More shall they speak; for now I am bent to know,
By the worst means, the worst.

The witches are only too happy to give Macbeth what he asks. They conjure up a succession of apparitions, who advise:

1. Beware Macduff.
2. None of woman born shall harm Macbeth.
3. Macbeth shall never be vanquished until Birnam wood comes to Dunsinane.
4. A line of kings shall follow Banquo's death.

Since he can do nothing about the last

prophecy, Macbeth determines to deal with the first. Learning that Macduff has already fled to England, he puts Lady Macduff and all her family to the sword. But he is greatly heartened by the other two prophecies, for they seem to imply clearly that no one shall harm him, and that he shall not be vanquished.

In the last scenes of the play, however, he discovers that the witches' words have another meaning. Birnam wood does indeed come to Dunsinane, for Malcolm's army wears its leafy branches as camouflage; and Macduff, who finally kills Macbeth, was not *born* of woman, but 'from his mother's womb untimely ripp'd' – that is, he was born by Caesarean section.

An inescapable fate?

Prophecy is the outcome of divination, and the example of Macbeth, and the advice given him by the witches, should serve to make clear the difference between divination and prediction. What the witches foretold was *not* predetermined: if Malcolm's men had not hidden behind leafy branches from Birnam wood, if Macduff had not returned from England to avenge the murder of his family, then Macbeth might well have lived out his reign and died in his own bed.

Indeed, Macbeth failed principally because of the psychological effect of the prophecies upon his self-confidence. The weird sisters did not make any specific predictions: they made only negative statements: 'None of woman born shall harm Macbeth. . .' and 'Macbeth shall never vanquished be until. . .'. They did not say that someone who was not born of woman *would* harm Macbeth; but the effect of their prophecy was that Macbeth's confidence was raised so high that, when he discovered that Macduff was not 'of woman born', he was immediately destroyed by his own guilt and superstitious fear.

If, then, divination is not prediction and is not concerned with predetermined events, what use is it? Why go to a fortune-teller with your problems, if a newspaper 'agony aunt' or even a close friend can provide you with a wealth of good advice? The reason, quite simply, is that the diviner does not make use of information that he or she consciously possesses about the person making the consultation: by the use of some means – whether it is the entrails of a freshly killed animal, arbitrarily chosen objects, a crystal ball, the astrological birth-chart of the subject or certain marks, such as moles, upon his person – the diviner is put in touch with information that is obtainable only by transcendental methods.

To those for whom a belief in the free will of the individual is paramount, the idea of a predetermined future is totally unacceptable. But look at it in this way. Someone's birth can be compared to the launching of a space vehicle. At the moment of 'lift-off', all the conditions are known and understood by mission control: the rocket will follow a predetermined trajectory, and at a known time the vehicle will be detached and will follow a predetermined course. The astronaut need do nothing thereafter; he can leave the future manoeuvring of the vehicle to those on Earth. But he is also provided with manual controls that he can use himself; he may become bored and start tinkering with fine adjustments in flight that produce results he did not expect; or, in a fit of rage – or other show of temperament – he may throw himself about the capsule and disturb its equilibrium. Whatever he does, *of his own free will*, will be recorded by mission control; and they can immediately inform him what will be the outcome of his actions, however unplanned.

They can, however, only advise. If he persists in what he is doing he may miss his target and disappear for ever in the depths of space, and nothing that anybody on Earth can do will help him.

This is how divination works. The diviner can give advice on the basis of information that is not available to his subject; he can predict the outcome of a particular course of action and suggest an alternative; but he cannot state that any future event will definitely occur.

All divination, by whatever method, follows the same sequence:

First, a question is formulated. This may range from something very specific – such as 'Will I win today's lottery?' or 'Should I marry this man?' – to general enquiries of the form 'What will my future life be like?' Obviously, the more specific the question, the more specific the answer is likely to be – and, therefore, the more trustworthy it is for the enquirer. Generalised questions usually attract answers that are susceptible of many different interpretations.

Next, some physical means is employed to

Below a geomancer practises his art. Reading meaning into randomly generated patterns remains popular. In the West, tea leaves are read, in other cultures the throwing of inscribed tablets – similar to the throwing of dice – is a common method of divination (divining tablets from Mashonaland, Zimbabwe, right). The belief persists that a specially gifted person – shaman, witch doctor or fortune teller (a Vietnamese stick thrower, below right) – is needed to practise divination, but it seems that almost anyone can

Left: the life of an individual can be compared to a space mission. Its purpose is known to mission control, who can – and do – manoeuvre the spacecraft from the Earth. Yet the crew could depart from the prearranged programme. Mission control could advise the crew not to, and they could still take no notice. Similarly, *we* have free will; divination can only advise us; it does not actually determine the future of our lives

provide a link between the enquirer and the diviner. The enquirer may be asked to provide an intimate possession, to touch something belonging to the diviner, or to make an arbitrary choice of cards from a pack, objects thrown to the ground, or any random arrangement of things from which he does not make a conscious selection. Or the diviner may employ some device, such as a crystal ball or a pendulum, on which he can concentrate so intensely that consciousness of his surroundings recedes to a point where he is effectively in a trance. Drugs may also be used for this purpose.

Skill – or cunning?

Then, avoiding any temptation to make use of knowledge he may consciously possess about the enquirer, or to reason logically from one premise to another, the diviner *intuitively* produces his 'message'. Depending upon his skill – or cunning – this message may be straightforward advice of a practical nature, or a succession of cryptic statements that only the enquirer can interpret for himself. Frequently, as innumerable tales throughout history have told us, this advice can appear so obscure that the enquirer despairs of it; on occasion, diviners have been killed by their clients in an agony of frustration.

The methods of divination have their own archaic names, from abacomancy – divination from patterns of dust – to zoomancy – the observation of the behaviour of animals. There are, however, five methods of divination that have particularly attracted the attention of practitioners over the centuries, and that have therefore gathered about them a vast amount of literature and working tradition. These are astrology (chapter 2), cartomancy, cheiromancy, geomancy, and the Chinese method of divination known as the *I Ching*.

Although astrology has claimed to be the oldest of these, there is little doubt that geomancy is as old – and it is certainly the simplest. In this context, geomancy got its name from the practice of making a pattern of holes in the earth, and should not be confused with the Chinese practice of *feng-shui*, which is concerned with finding propitious places on which to erect tombs, build houses or found cities.

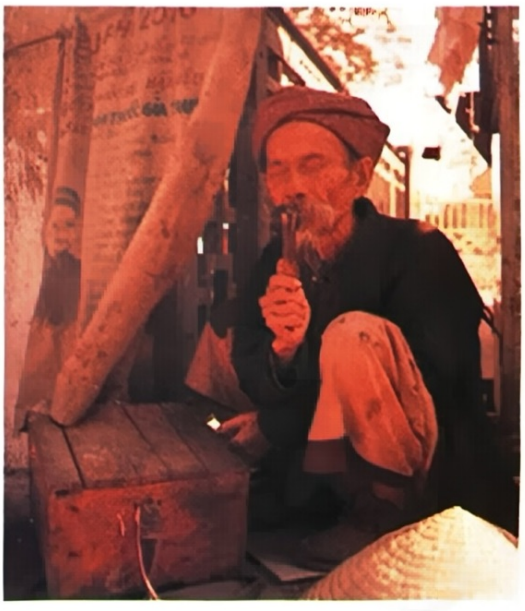
Geomancy, in fact, may be the surviving ancestor of the *I Ching*: the divinatory figures of geomancy are made up of four lines, and those of the *I Ching* of six. Since each line can take one of two forms, the total number of combinations in geomancy is only 16, compared with the 64 of the *I Ching*.

The lines may be marked in the dust or earth – which is how the art of geomancy got its name; or they may be made up of kernels or stones; or they may of course be marked on paper.

The art is said to have originated in Persia, but it is widespread over the whole of the Mediterranean region, the near East and much of Africa, and since its spread over this area followed the spread of Islam it is at least possible that Arab traders had brought it from China. In Malagasy, geomancy is known as *sikidi*; on the west coast of Africa as *djabe* or *fa*. In Europe, the first full description occurs in the second book of the *Occult philosophy* of Cornelius Agrippa (1531).

The right lines

The 'lines' from which the geomantic figure is derived can be obtained in a wide variety of ways. They may be straight horizontal lines traced – randomly and without conscious direction – in the dust, which are distinguished as short or long lines; or they may be either straight or wavy. These two classes of line are then identified as 'odd' or 'even', and are represented conventionally by either one or two stones, palm kernels or dots. Or the lines may be made up of a random succession of dots, the oddness or evenness being determined by the number of dots. In



fa, a handful of 18 palm kernels is passed from the left to the right hand, and the number of kernels remaining in the left hand is counted as either odd or even.

To make a geomantic figure, four lines are required. If, for instance, the first and third are even, and the second and fourth odd, the resultant figure will be:

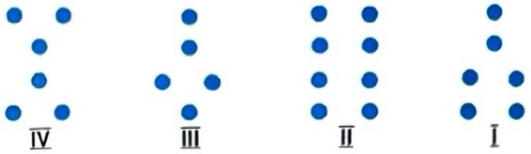
Altogether, there are 16 of these figures, each with its own name and significance, as detailed in the accompanying table.

Below: how the geomantic figures are traditionally interpreted in the four main methods – the European, which uses Latin designations; the two West African systems of *fa* and *djabe*; and the *sikidi* of Malagasy

The meaning of the figures

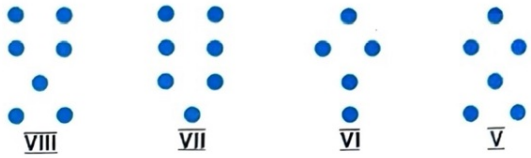
Figure	Latin name	Fa	Djabe	Sikidi
	Puer Yellow, rash, inconsiderate	**Lete** Abscess	**Kaoussadji** Long Life	**Alakarabo** Leads to danger
	Amissio Loss	**Tche** Pearl	**Marili** Sickness	**Adalo** Tears; protection against enemies
	Albus White; wisdom	**Touloukpin** Unripe papaya fruit	**Baiala** Family	**Alohomora** Favourable to thieves
	Populus The crowd	**Yekou** Spirits of the dead	**Djamaha** The crowd	**Asombola** Plenty
	Fortuna major Good luck	**Houolin** Pointed shell	**Adouhi** Victory over an enemy	**Adabaray** Fire
	Conjunctio Joining together	**Holi** Removal of an obstacle	**Dam'hi** Success	**Alatsimay** Protects thieves and enemies
	Puella Girl; pretty face	**Toula** A firing gun	**Nagiha** Soon	**Alikisy** Good fortune in love; riches
	Rubeus Red; passion, vice	**Ka** Canoe	**Oumra** Marriage	**Alabiavo** Riches, jewels
	Aquisitio Success, gains, good fortune	**Fou** Blowing the fire	**Kali** Good fortune on the right; bad on the left	**Alihotsy** Lightness of spirit
	Carcer Prison, delay, confinement	**Di** Resistance	**Sikaf** Law, command	**Akikola** Protects vagabonds
	Tristitia Sorrow, melancholy	**Aklan** Porous stone	**Mankuss** Death	**Betsivongo** Obsession, tears
	Laetitia Joy, health, beauty	**Abla** Connection	**Laila** Riches	**Alahijana** Strength; happy marriage
	Cauda Draconis Exit, lower kingdom	**Gouda** Evil gods	**Sahili or Haridja** Serious intentions	**Karija** Fate
	Caput Draconis Entrance, upper kingdom	**Sa** Between the thighs	**Raia** Health	**Alakaosy** Evil fate, disputes, war
	Fortuna Minor Less good fortune; external aid	**Losso** Riven tree	**Sapari** Journeys	**Soralahy** Pride, domination
	Via The way, journeys	**Gbe** Language	**Dariki** Children	**Taraiky** Loneliness; death

In Africa, these figures are interpreted singly, or in pairs. In the European tradition, the procedure is more complicated. In the first operation 16 lines are produced, and these are used to generate four 'Mother' figures. Suppose for example that the four following Mothers are produced:



These are respectively: Fortuna Minor, Populus, Puer and Conjunctio.

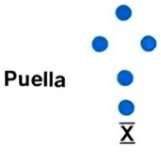
From these four Mothers four Daughters are produced, by adding the four lines horizontally, from right to left:



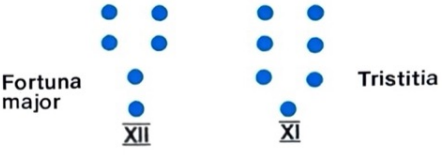
These are, respectively, Amissio, Puella, Tristitia and Albus.

Now four Nephews must be produced. The first Nephew is obtained by adding *together* the first and second Mothers, and marking the sum as before, with one dot for odd and two dots for even. So, from the first two Mothers, we get:

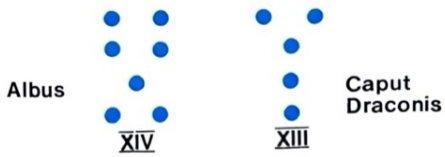
And from the second two Mothers:



Similarly the third and fourth Nephews are formed by adding together the first and second, and the third and fourth, Daughters:



From the Nephews, two Witnesses are obtained by the same process of adding together:



And finally, a Judge is obtained by adding together the lines of the two Witnesses:

The final pattern of 15 geomantic figures will provide the answer to one of 16 questions:

1. Will he have a long life?
2. Will he become rich?
3. Should he undertake the project?
4. How will the undertaking end?
5. Is the expected child a boy or a girl?
6. Are the servants honest?
7. Will the patient soon recover?
8. Will the lover be successful?
9. Will the inheritance be obtained?
10. Will the lawsuit be won?
11. Will he obtain employment?
12. How will he die?
13. Will the expected letter arrive?
14. Will the journey be successful?
15. Will good news arrive soon?
16. Will the adversary be overcome?

It can be seen that these questions cover most common preoccupations; with experience, the analysis of the geomantic pattern can be applied to other, rather more specific questions.

How are the figures interpreted, and how is the question answered? Let us suppose that the example above was obtained in answer to the question 'Will the lawsuit be won?'

In this case the Judge is Acquisitio, which signifies success, and the two Witnesses are Caput Draconis and Albus. These are all fortunate omens, and the implication is that wisdom will prevail and the lawsuit will be won with honour. We can investigate the progress of the lawsuit by considering the pattern of figures from the beginning. The outcome of the suit depends upon others (Fortuna Minor), whom we may suppose are the jury (Populus), likely to behave capriciously (Puer), but finally reaching a common verdict (Conjunctio). Perhaps the possibility of losing the suit (Amissio) is concerned with a girl (Puella), who can be the cause of sorrow (Tristitia) unless wisdom (Albus) prevails. The representative (Fortuna Minor) of the girl (Puella) could be a danger (Tristitia), but good fortune (Fortuna Major) will be the final outcome.

Right a South African witch doctor casts and reads the 'wise stones'

Below: on the west coast of Africa, in the geomantic method known as *fa*, palm kernels are passed from hand to hand for a few moments. Those that end up in the left hand are counted and the geomantic figures are then formed from them

Open to interpretation

Geomancy is the most primitive of all the methods of divination, but this example shows clearly how adaptable it is as a means of interpretation. Because of the sequence of operations by which the Judges and Witnesses are obtained, there are only eight possible Judges – Acquisitio, Amissio, Fortuna Major, Fortuna Minor, Populus, Via, Conjunctio, Carcer – and each of these Judges has a possible eight combinations of Witness, this figure being doubled due to the fact that each Witness may stand on either right or left of the Judge. Altogether, therefore, there are 128 possible configurations of Judge and Witnesses, each of which can be an answer to one of 16 questions.

Methods of divination to be considered in succeeding articles are far more complex. In the *I Ching*, for example, there are 64 basic figures; while in the use of the Tarot cards there are a minimum of 22 cards, which may be disposed in an almost infinite variety of ways.

I Ching: enquire within

One of the oldest and most flexible of divinatory methods is also the most fascinating. The Chinese Book of Change, the *I Ching*, has been respected as an oracle for at least 3000 years

CONFUCIUS SAID: 'If some years were added to my life, I would give 50 to the study of the *I Ching*, and might then escape falling into great error.' That was in 481 BC, when he was already nearly 70 years old, and had written a series of commentaries on the text of the book the Chinese call *I Ching*, which means 'the Book of Change'.

The *I Ching* is one of the oldest and most respected oracle books in the world. In its present form it can be traced back at least 3000 years – and even at that time it was already considered venerable, being based upon more primitive forms of oracle.

The Book of Change draws its basic philosophy from the ancient Chinese faith known as Tao. The word 'tao' is most usefully translated as 'way' – as in the Christian expression 'I am the Way, the Truth, the Life' – but no English word provides a really satisfactory equivalent, and even in Chinese it is susceptible of a variety of meanings. Indeed, as one Chinese inscription puts it: 'the Tao that can be put into words is not Everlasting Tao.'

Taoist writings are full, in fact, of negative definitions: 'power and learning is adding more and more to oneself, Tao is subtracting day by day; rigour is death, yielding is life; as laws increase, crimes increase.'

To the Taoist sage the world is not made up of discrete particles of time and space: everything is part of everything else, and reality consists of ceaseless change. The river that one paddled in yesterday is not the river one swims in today; and so the Universe is seen as a moving pattern in which nothing is permanent. So the *I Ching* is different from other oracle books: it does not regard the past, the present and the future as fixed; instead, it treats time and fate as dynamic and flowing, never the same from one moment to the next. The advice that one obtains by consulting the *I Ching*, therefore, is of possibilities: if you act in a particular way it is likely to result in such-and-such an outcome.

As a tool of divination, the *I Ching* is very similar to geomancy in principle (see page 91); but the divinatory figures that are generated are composed of six lines instead of four, and therefore there are a possible 64, rather than 16, figures. Moreover, where the

Far right: K'ung Fu-tzu, the great Chinese philosopher known to us as Confucius

Below: a romanticised Western view of the ceremony involved in consulting the *I Ching*: the sticks are being passed through the smoke from an incense burner, while the enquirer makes his kowtows before them

Below: the philosophy of Tao contains a strong sexual element, and intercourse is regarded as the interchange of yin and yang between the two partners. The cup represents Autumn Days, the last of the Thirty Heaven and Earth postures. 'The lord Yang lies on his back, his hand at the back of his head, and lady Yin sits on his stomach, but turning her face to his feet'

Witness-Judge procedure of geomancy results in only 12% different interpretations, each of the *I Ching* figures contains within itself 64 possible variations, and can generate at least one further figure: the total number of interpretations, therefore, is:

$$64 \times 64 + 64 = 4160.$$

Taoist philosophy classifies all the energies of the Universe under two headings, yin and yang. Yin is passive, watery, pertaining to the Moon, essentially female; yang is active, fiery, pertaining to the Sun, essentially male. The lines that make up the divinatory figures are described as either yin or yang lines; a broken line represents yin, a continuous line yang.

The six-line figures are known as hexagrams. Each can be regarded as made up of two three-line figures called trigrams. Since each line of each trigram can be either continuous or broken, the number of trigrams is $2 \times 2 \times 2 = 8$. And since each hexagram is made up of two trigrams, the number of hexagrams is $8 \times 8 = 64$.

The traditional way in which these figures are generated is long and complicated. A bundle of 50 dried yarrow stalks is required; yarrow was used because it had a certain holy significance to the Chinese. One of the stalks is set aside, and is not used in obtaining the hexagram; there is some dispute among Western writers as to whether the fiftieth stalk plays any part in the tradition of the *I Ching* or not.

The remaining 49 stalks are then separated into two piles. After this, the procedure is as follows:

1. One stalk from the right-hand pile is placed between the little finger and ring finger of the left hand.
2. Stalks are removed four at a time from the left-hand pile until four or less are left. These stalks are placed between the ring finger and the middle finger of the left hand.
3. Stalks are removed four at a time from the right-hand pile until four or less are left. These stalks are placed between the middle finger and the index finger of the left hand.

The stalks held between the fingers of the left hand will now total either 5 or 9:

$$1 + 1 + 3 = 5$$
$$\text{or } 1 + 3 + 1 = 5$$
$$\text{or } 1 + 2 + 2 = 5$$
$$\text{or } 1 + 4 + 4 = 9$$

These stalks are then put aside, and the process is repeated with the remaining 40 or 44 stalks. At the end, the stalks held between the fingers will total either 4 or 8:

$$1 + 1 + 2 = 4$$
$$\text{or } 1 + 2 + 1 = 4$$
$$\text{or } 1 + 4 + 3 = 8$$
$$\text{or } 1 + 3 + 4 = 8$$

This pile is also set aside, and the process repeated with the remaining stalks. Once more, the stalks held in the left hand will total either 4 or 8.

There are now three little piles: the first contains 5 or 9 stalks, the second and third each contain 4 or 8. There are therefore eight possible combinations of these three quantities. These provide a yin or yang line:

5 + 4 + 4	Old yang line
9 + 8 + 8	Old yin line
5 + 8 + 8 9 + 8 + 4 9 + 4 + 8	Young yang line
5 + 4 + 8 5 + 8 + 4 9 + 4 + 4	Young yin line

The 'old' lines are also known as 'moving' lines: an Old yang line is seen to be changing into a Young yin line, and an Old yin line into a Young yang line. Each of the four types of line is also given a 'ritual number':

Old yin line	6
Young yang line	7
Young yin line	8
Old yang line	9

So far, only a single line has been generated. This is drawn as the bottom line of the hexagram, and then the procedure must be repeated five times more, the lines being drawn in ascending order.

Producing a single hexagram, therefore, can take five minutes or more. Those who let the *I Ching* govern their lives have developed a simpler and quicker method that requires only three coins. Chinese coins traditionally had an inscribed face and a blank or 'reverse' face – the side of a modern coin that gives the value is considered the inscribed side: if the blank face is given the value 3, and the inscribed face the value 2, tossing the three coins will provide a total of 6, 7, 8 or 9 – and so, taking this as the ritual number, the first line is obtained. It is possible, in this way, to obtain the hexagram in less than a minute.

What follows the obtaining of the hexagram? The texts of the *I Ching* are of several different periods and different kinds. First comes a description of the hexagram itself, in terms of the two trigrams of which it is composed; then comes the Judgement, which is said to have been composed by King Wen, the founder of the Chou dynasty (*c.* 1100 BC). This is a rather brief analysis of the hexagram as a whole.

'The superior man'

The next text, the Commentary, is traditionally attributed to Confucius, although it is improbable that he himself wrote it. This is generally longer than the Judgement, and takes note of the significance of the individual lines making up the whole hexagram. The third text, the Image, is succinct; it describes the kind of action that the sensible person – referred to usually as 'the superior man' – should take. This text has also been attributed to Confucius.

The final group of texts were composed by King Wen's son, the Duke of Chou, who destroyed the Shang dynasty in 1027 BC. These were written about 40 years after Wen's text: they are brief and rather cryptic, and they deal with the occurrence of Old

yang and yin lines within the hexagram.

One or two specific examples will illustrate the nature of these different texts, and the way in which they are interpreted.

In hexagram 63, Chi Chi – Climax and After – the upper trigram is K'an, which symbolises dangerous deep water, the Moon, the winter season, the north, the middle son, an ear, the 'element' wood and the colour red; the lower trigram is Li, representing fire, the Sun, summer, the south, the middle daughter, the eye, and the colour yellow.

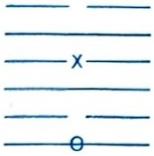
The text of *I Ching* describes Chi Chi as being an evolutionary phase of hexagram 11, T'ai, which means Peace. Hexagrams are read from the bottom, and the 'strong' positions are considered to be lines 1, 3 and 5. In T'ai, lines 1, 2 and 3 are occupied by yang lines, while lines 4, 5 and 6 are yin; in Chi Chi, the yang lines have migrated upward to their appropriate positions, displacing the yin lines to position 2, 4 and 6. Thus, says the text, everything is in its proper place. But although this is a very favourable hexagram, it still gives grounds for caution: for it is when equilibrium has been reached that any sudden displacement may cause order to revert to disorder.

The Judgement on Chi Chi reads: 'After the climax there is success in small matters. Righteous persistence brings its reward. Good fortune in the beginning, but disorder in the end.'

Now comes the Commentary. 'Chi Chi indicates progress in small matters. The proper position of the yang and yin lines shows that righteous persistence will be rewarded; the weak line at the centre of the lower trigram indicates good fortune in the beginning, but the way peters out, efforts come to an end, and disorder returns.' This is one of a number of cases in which the Commentary seems to add very little to the Judgement, but in other cases it can be of considerable value in elucidating the often obscure phrases of the Judgement.

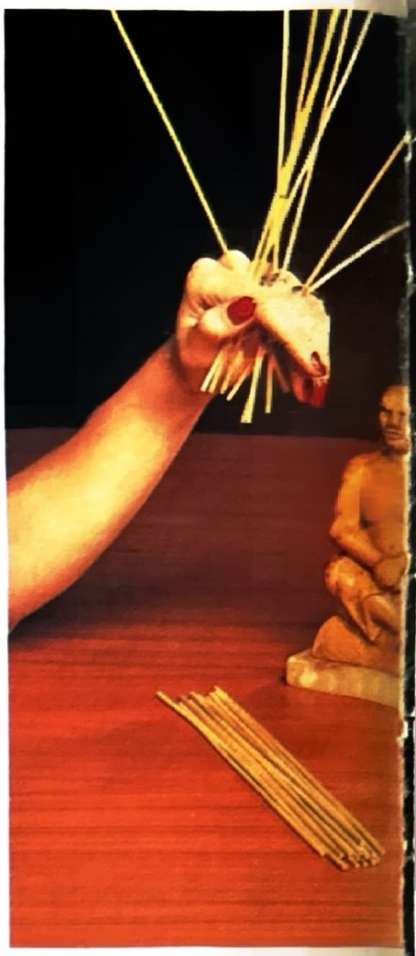
The verses of the Duke of Chou refer to the occurrence of 'moving' lines, the Old yang and Old yin lines. The bottom line of Chi Chi is a yang line: if it is an Old yang line, with a ritual number 9, then the verse for that line should also be read.

These Old lines are also moving into Young lines. Suppose, for instance, that the hexagram Chi Chi was obtained as follows:



When the old lines have changed into their opposites, the hexagram will be:

This is a very different hexagram. It is 62,



Above right: how the sticks are held between the fingers of the left hand

Above far right: in this porcelain dish the shepherdess, a yin symbol, is surrounded by two male and one female sheep: these sheep represent the trigram Tui, or Joy

Right: an example of an English translation of the text of the *I Ching*, giving the Judgement, the Commentary and the typically cryptic verses written on the individual lines

63 Chi Chi Climax and After

The trigrams:
above: K'an dangerous deep water
below: Li fire, brightness
This hexagram represents an evolutionary phase of hexagram 11, T'ai, Peace. The strong yang lines have moved upward into their appropriately strong positions, displacing the yin lines into their proper weak positions. Everything is in its proper place. But although this is a very favourable hexagram, it still gives grounds for caution: for it is when equilibrium has been reached that any sudden movement may cause order to revert to disorder.

The Judgement
After the climax there is a success in small matters. Righteous persistence brings its reward. Good fortune in the beginning, but disorder in the end.

Commentary
Chi Chi indicates progress in small matters. The proper position of the yang and yin lines shows that righteous persistence will be rewarded; the weak line at the centre of the lower trigram indicates good fortune in the beginning, but the way peters out, efforts come to an end, and disorder returns.

The Image
Water over the fire, the image of Chi Chi. The superior man, accordingly, gives due thought to the misfortunes to come, and takes precautions in advance.

The Lines
In the bottom line, NINE signifies:
Like a driver who brakes his chariot,
Or a fox with a wet tail.
No blame.

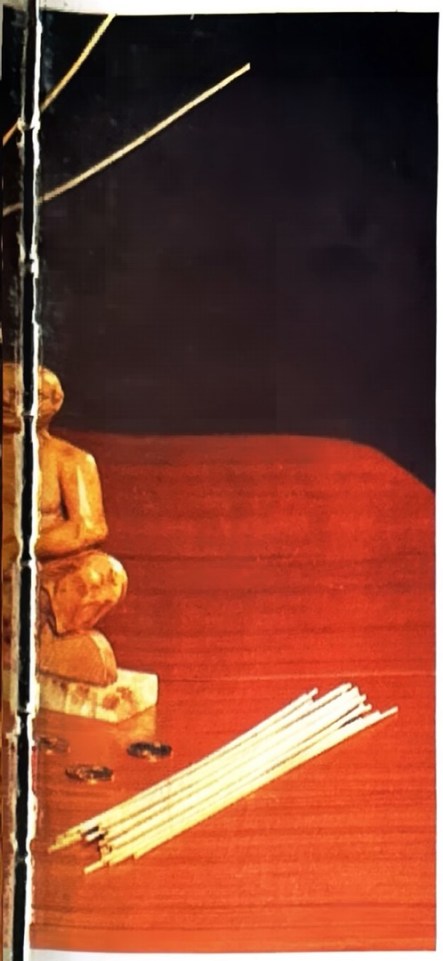
In the second line, SIX signifies:
She loses her carriage curtain.
Do not run after it.
For in seven days it will be recovered.

In the third line, NINE signifies:
The Illustrious Ancestor
The emperor Wu Ting
Attacked the country of devils.
Three years he took in subduing it.
Small men are not fit for such enterprises.

In the fourth line, SIX signifies:
The finest clothes turn to rags.
Be careful all day long.

In the fifth line, NINE signifies:
The neighbour in the east sacrifices an ox:
But it is the neighbour in the west,
With his small spring sacrifice,
Who is blessed for his sincerity.

In the sixth line, SIX signifies:
His head is in the water.
Misfortune.



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Hsiao Kuo. The Judgement, Commentary and Image for this second figure should also be read for interpretation, but since the lines have now moved the verses of the Duke of Chou are not significant.

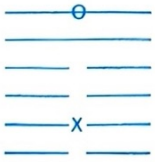
One can go further: if the lines are moving independently of one another, there are two possible intermediate hexagrams between Chi Chi and Hsiao Kuo. These are:

The first is 49, Ko; the second is 39, Cheng. Reading the texts for these two hexagrams, but remembering that only one can be the true intermediate, may help in the interpretation.

One has to be very careful in trying to present an imaginary worked example of the use of the *I Ching*: too often, indeed, one finds that the hexagram obtained is Meng:

> I do not seek out the inexperienced; he comes to find me. When he first asks my advice, I instruct him. But if he comes a second or a third time, that is troublesome, and I do not advise the troublesome. . . .

As an experiment, I asked the *I Ching* 'whether it would be wise for me to finish this chapter tonight'. The hexagram I obtained was 20, Kuan:



Kuan signifies contemplation: 'the worshipper who has washed his hands, but not yet made the offering'. The upper trigram of Kuan is Sun, representing wind and gentleness; the lower trigram is K'un, the Earth, the passive. The Image of Kuan is the wind moving over the Earth. 'So did the kings of old visit all parts of their kingdom, to see their people and give them instruction.'

There is an Old yin line in the second line, which signifies:

> Contemplation through the crack of the door
> Is sufficient only for a housewife

and the Old yang line in the sixth line signifies:

> Contemplating himself
> The superior man is without reproach.

It seems that *I Ching* is advising me not to continue with the chapter until I have had time to think about it some more; it also suggests that my time would be better occupied in ascertaining whether the people who work for me have any problems.

Now the moving lines must be allowed to develop, and the resultant hexagram is 29, K'an:

This is one of only eight hexagrams in which the trigram is doubled. In each trigram a strong yang line has plunged into the deep between two yin lines, as water lies in a deep ravine. The Judgement reads: 'Abyss upon abyss, danger piled on danger. But if you are sincere there is success locked up within.' The Commentary continues the theme, and the Image of K'an is: 'The water flows on and on to its destination; the image of the abyss upon the abyss. So the superior man walks in eternal virtue, instructing others in the conduct of their affairs.'

The last part of this text clearly relates to the advice given above – although the warnings of danger seem unnecessarily strong in such a minor matter. Can the intermediate hexagrams throw any light on the matter?

The two possible intermediates are:

These are, respectively, 59, Huan, and 8, Pi.

Huan signifies dispersal, and the advantageousness of travel. In the sixth line, the Old yang line signifies:

> He disperses bloodiness
> Keeping evil at a distance
> Departing without blame.

Pi, on the other hand, is the image of holding together; it signifies those who follow the lead of the superior man.

It was only a light-hearted question, and it deserves a light-hearted answer. The *I Ching* has told me that it is time for me, and my staff, to stop work and go home!

Coming up trumps

Is it possible to read an individual's future from a pack of Tarot cards? In this most popular method of divination, the cards are laid out in a prescribed pattern and consulted, and then the significance of each one is interpreted

The first mention of playing cards occurs in records for the years 1377 to 1379. by the end of the 15th century (above) they were widespread in Europe

Opposite: stages in the development of the images of two representative Tarot cards, Strength (above) and The Fool (below). The packs represented are, respectively: one attributed to Bonifacio Bembo, executed about 1480 (left); the 'Swiss' pack published by Muller since the late 18th century (centre top); a modern Italian pack of traditional design published by Modiano (centre), the Grimaud 'Marseilles' pack, from a 17th-century design (centre bottom); pack designed by the occultist Oswald Wirth, late 19th century (top right); a Spanish pack of early 20th century design (centre right); and pack designed by another occultist, A E. Waite, and published at the turn of the century (bottom right)

THE DIVINATORY methods so far considered are aleatory – that is, they are based upon what seems to be a random selection of identical elements. The word 'aleatory' comes from the Latin for dice-player, and of course one of the simplest of divinatory methods consists in the throwing of one or two dice.

However, numerous experiments in psychokinesis have suggested that an experienced dice-thrower can influence the results of his play; and it may well be that the subconscious mind, or some transcendental aspect of it, is able to calculate the implications of the number of geomantic marks being made, or, as in the *I Ching*, yarrow stalks selected, before the hand has completed its movements.

It is certainly worth postulating that the mind, being in some kind of telepathic awareness of all the interpretations available, in some way selects the most suitable answer to the question that has been posed, and then subconsciously causes the appropriate figure to be generated.

Some process of this kind seems to be at work in divination by means of the Tarot pack, which is probably nowadays the most popular of all methods.

The use of a pack of cards for divination is definitely not aleatory, since each of the elements selected is distinct, and has a particular significance all its own. There are a number of packs of specially designed cards available for divination – the French firm of Grimaud, for example, market such sets as the cards of 'Mademoiselle Le Normand', or 'The Parlour Sybil' – but most diviners are able to make do with an ordinary pack of playing cards. And in this respect it is important to remember that the Tarot pack is also an *ordinary pack of playing cards*. Although some of the images of the Tarot pack may appear bizarre to north-western Europeans familiar only with the standard 52-card bridge and whist pack, they do not embody an intrinsic occult significance. For 500 years, the Tarot cards have been the standard pack for a variety of common card games that go under the generic name of *tarok* or *tarocchi*.

There are very many ways of 'consulting the cards', and there is no reason to suppose that any one way is more correct or successful than any other. All that is important is that the practitioner should be completely confident about his or her method and the way in which the cards are to be interpreted. The easier methods make use only of the 22 trumps, which have been given by occultists the impressive title of Greater Arcana; the distinctive images of these cards are of great help in attaching significance to each, and in remembering what that significance is.

More complicated methods employ all 78 cards; but here even experienced practitioners find it necessary to resort to textbooks to remind them of the accepted significance of the numbered suit cards.

Ideally, to make consulting the Tarot a true divinatory method, each practitioner should decide exactly what meaning to attach to each card – even if this departs widely from what is commonly held to be the meaning, it should not affect the process of divination in any way. In practice, it is common to consult a textbook on the subject; although this may provide a rather stilted, formalised interpretation, it makes divination by Tarot very much easier.

The same kind of divinatory process can of course be carried out with a pack devoid of Tarot trumps, such as a common 52 or 56 card pack, but in this case the interpretation is commensurately more difficult.

The ways in which the cards are used in divination are of two kinds: either a select number of cards is chosen for interpretation, or the complete pack is disposed according to a formula, producing a pattern of distribution in which the position of the card determines its part in the divinatory process.

As in all other methods of divination, the process comprises a questioner, who asks for advice by proposing a particular question, and the diviner, who interprets the answer. The cards may be dealt out either by the questioner or by the diviner – no two authorities agree on this, and it may also depend upon the particular method employed – but it is essential that both should concentrate fully upon the question. As with the *I Ching*, a frivolous question, or one that is idly put, will provoke an answer that may be equally facetious or, possibly, quite frightening in its implications.

One example must suffice to show how the Tarot cards are laid out in a pattern, and how they are then used for divination.

The questioner in this case is a mature but still-young woman, who has been married for several years; she has a full-time professional job. Due partly to the tastes and partly to the particular ambitions of her husband, she finds herself compelled to live in a district that she finds unpleasant. Should she endeavour to make her present home as pleasant as possible, or should she try to persuade her husband to move elsewhere?

The particular arrangement of cards used is one known as the 'Celtic cross'; only the 22 Tarot trumps are required for this.

1. A card is chosen to represent the question; this is known as the significator. In this particular case The Star, representing 'new beginning; pleasure; salvation', was the card selected.

2. The questioner shuffles the remaining cards, cuts them, and places them in a pile some way to the left of the significator.

3. The top card of the pile is turned over from left to right (so that it remains as it was in the pile, either upright or reversed) and placed directly on top of the significator. This card represents the present conditions in which the questioner lives or works. The card is The World. In spite of the nature of the question asked, it therefore would appear that the questioner is on the whole satisfied

A glimpse of the future

The account book of the treasurer to Charles VI of France records a payment in the year 1392 to the painter Jacquemin Gringonneur for three packs of cards 'in gold and various colours, of several designs, for the amusement of the said King'. The three cards illustrated here – Death (left), The Sun (right) and The Fool (below right) – are from 17 that survive in the Bibliothèque Nationale in Paris and that were long believed to be the original Gringonneur cards. They are now, however, thought to be from the 15th century and of Italian origin

with her lot, and feels a sense of achievement in her work, and perhaps also in her home.

4. The second card is placed across the first, to represent any immediate influences that may affect the interests of the questioner. The card is Temperance: whatever decision is reached, it is likely to be controlled by reason.

5. The third card is placed above the first group of cards, to represent the ultimate aim of the questioner. This is the Fool, reversed, which confirms the previous card. And since it is reversed, it signifies the opposite of luck or fate, and implies a rational outcome.

6. The fourth card is placed below the first group to represent the influences from the past that have affected the questioner and the question she asks. The Empress tells us that she is a woman of considerable understanding and intuition.

7. The fifth card is placed to the right of the central group to represent the recent past. The Hermit suggests that the passage of time has brought wisdom and further understanding.

8. The sixth card is placed to the left of the central group to represent influences that may come into play in the near future. The Hanged Man represents adaptability and change; it brings knowledge of the future and new understanding of the past: it advises the questioner to face up to whatever change may come.

These first six cards drawn have presented a picture of the questioner and her problem, as well as revealing some small details that she did not provide. The final four cards, which are placed one above the other to the right of the table, supply the divinatory advice.

1. The first card represents the present position of the questioner, and may answer the question directly. It is Death – not to be taken literally, for this card represents change by transformation.

2. The second card represents people and factors that may have an influence upon the answer. It is the Wheel of Fortune which, though it also signifies change, counsels prudence.

3. The third card reveals the inner feelings of the questioner, which she may well have kept hidden. It is the Moon, reversed; this suggests very strongly that the questioner does not really want to make the change that she has said she is considering.

4. The final card represents the end result of everything indicated by the preceding cards. The Pope is the representative of the firm foundations of our lives, the concepts of natural law and justice. This card, appearing in this position, suggests that the questioner and her husband have a mutual sympathy and understanding; their marriage appears to be a successful one; and it would be dangerous to threaten its stability by pursuing the change that was the subject of the question.

A brief summary of the symbolic significance of the Tarot trumps

1 Magician	Man in search of knowledge; the answer he seeks
2 Woman Pope	Intuition, inspiration; subconscious memory, lack of foresight
3 Empress	Human understanding, femininity, sensuality, beauty and happiness
4 Emperor	Masculinity, independence, creativity, action
5 Pope	Advice: justice; healing
6 Lovers	Choice, decision
7 Chariot	Achievement, success; danger of defeat
8 Justice	Caution in taking advice; control of one's fate
9 Hermit	Time; wisdom; withdrawal
10 Wheel of Fortune	Change; prudence; the eternal return
11 Fortitude	Strength of purpose, coming danger
12 Hanged Man	Adaptability; desire to learn; violent change and sacrifice
13 Death	Change by transformation, rebirth
14 Temperance	Moderation, mercy; modification
15 Devil	The adversary; caution
16 The Tower	Punishment; pride; divine inspiration
17 The Star	New beginning; pleasure; salvation
18 The Moon	Uncertainty; changeability
19 The Sun	Splendour, health, wealth, affection; treachery
20 Judgement	Punishment or reward; final achievement
21 The World	Fulfilment, completion on a material level
0 The Fool	Fate; luck; the end

Above: how the Tarot cards are laid out in the spread known as the 'Celtic cross'. The significator card is The Star; laid on top of this is The World, representing the present condition of the questioner, and Temperance lies across both. Subsequent interpretation is explained in the text

A pattern of Tarot cards, however many have been laid out, is obviously very different from the pattern of dots obtained in geomancy (see page 91), or the pattern of lines in the *I Ching* (see page 94). Each of the cards has its own significance, and the position of each in the pattern also has a particular meaning. The Tarot cards must be read like the pages of a book: if we consider only the 22 trumps, there are over a thousand million million million different sequences. Add to this the incalculable number of groups of two, three, four or more and you will see that a combination can be obtained that will represent every conceivable situation – and that still leaves another 56 cards that can be used in interpretation

On the other hand...

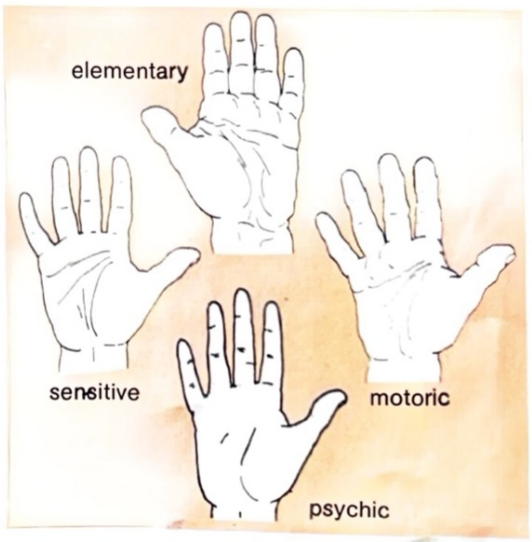
The lines of the hand are as individual as personality – but is there a connection between them? And can a diviner trace a person's destiny in his or her palm? An analysis of the practice of palmistry indicates the degree of faith practitioners have in these marks

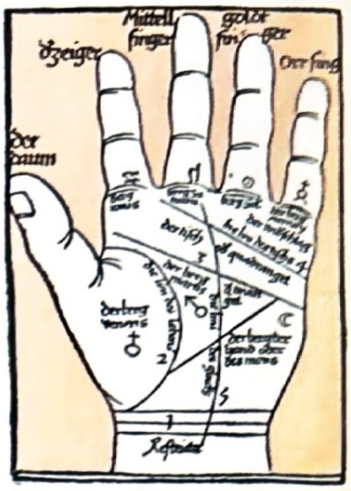
DIVINATION IS a means of answering questions and giving advice on what future action should be undertaken by the questioner. It works best with intense concentration of both practitioner and questioner, apparently by providing some kind of telepathic insight into the nature of the problem, the personality of the questioner, and the probable outcome of any given action.

To obtain the necessary concentration, almost all practitioners require some object on which they can focus their conscious faculties, in order to give the subconscious a free rein. Certain practitioners make use of something like a crystal ball, or a pendulum; but greater success seems to be achieved if the object on which attention is focused has some direct physical relationship with the questioner: playing cards that have been shuffled and cut by him or her, or some other kind of object that has been handled.

So far, all the methods of divination described and analysed in these chapters – geomancy, the *I Ching* (Book of Change) and the ancient Tarot cards – have required a personal involvement on the part of the questioner, but the means of divination has always been physically divorced from him or her. There remains one major divinatory method that requires the closest co-operation of the questioner, because the object being consulted is part of the human body itself. This method is cheiromancy, more popularly known as palmistry.

There are many who would not regard palmistry as a divinatory method at all. Since the law recognises the uniqueness of the human fingerprint, there is every reason to suppose that the palmprint is just as individual. We recognise a particular dog or cat





Above left: palmistry has a long and venerable history – and remains popular today

Top: a diagram from Bartolomeo Cocle and (above) from Jean d'Indagine illustrating the ancient association between parts of the hand and the planets

Left: the four basic shapes of the hand according to Carl Carus. The 'elementary' hand is typical of the manual worker; the 'motoric' is large and strong but flexible, and is found among businessmen and craftsmen; the 'sensitive' hand, typical of writers and artists, is not as strong as the 'motoric' but is full of energy; and the 'psychic' is long and soft, indicating a personality that is sensitive and intuitive

by the distinctive pattern of its coat, and we could similarly recognise a person by the pattern of their palmprint. Since it is well-known that animal coat patterns are affected by many factors – the climate, the time of year, the health and genetic background of the individual – it is at least arguable that the human palmprint similarly has something to tell us about the individual.

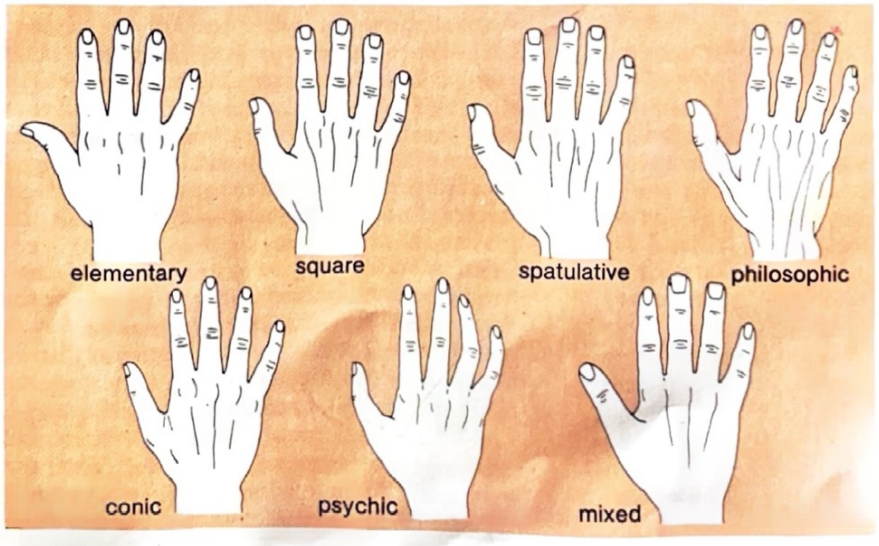
One palmist, in fact, has claimed that he read a young man's hand, saw that there was a strong indication that he might commit suicide, and suggested to him that he should have psychiatric help – and that six months later the lines of the young man's hand had changed out of all recognition.

There is some scientific evidence that the occurrence of abnormal lines on the hands may be related to certain hereditary diseases, such as heart defects or those related to chromosome deficiencies. In traditional palmistry the so-called 'simian' line – in which the Head line and the Heart line run as one – is held to be an indicator of 'degeneracy'; now a group of doctors in New York has reported that this line often occurs in mongoloid children or in those whose mother suffered an attack of rubella (German measles) during pregnancy.

Above: the 'Earth' hand is square, with short strong fingers and few lines; the 'Air' hand has longer fingers and finer lines; the fingers of the 'Fire' hand are short with many lines; and the 'Water' hand is narrow and delicate, with a mesh of fine lines

Below: the 'elementary' hand is typical of primitive people; the 'square' hand indicates a practical nature; the 'spatulative' hand denotes excitability; the 'philosophic' hand is self-explanatory; the 'conic' hand indicates someone who prefers pleasure to work; the 'psychic' hand speaks for itself. But most hands fall into the 'mixed' category

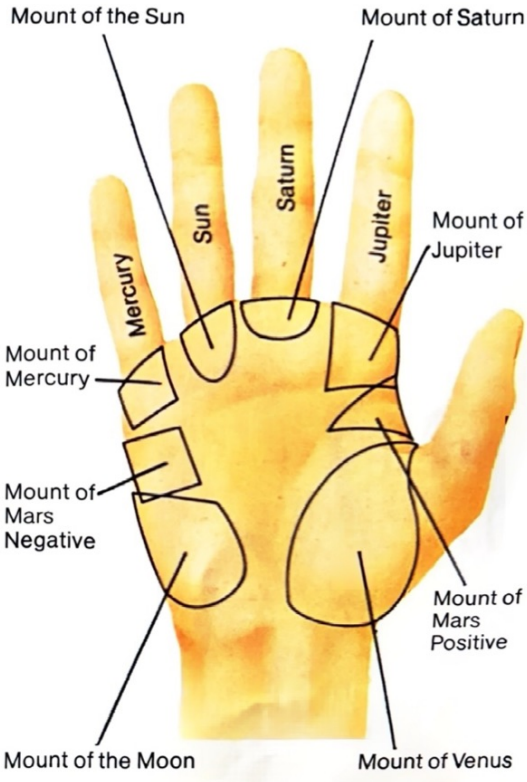
Right: the mounts and fingers



Whether or not there is any validity in this suggestion of a direct connection between the human metabolism and the lines of the hand, there is no doubt that the commonly accepted significance of the lines and parts of the hand must be based upon many centuries of empirical observation. Cheiromancy is recognised in the Bible, as in Proverbs 3:16: 'Long life is given in her right hand. In her left are riches and honour.' Or in Job 37:7: 'He seals up the hand of every man, that all men may know his work.'

Indeed, in this second verse, we can detect the old magical element in cheiromancy, the belief 'as above, so below'. It is quite possible that the first palmists believed the lines of the hand to be some sort of map of celestial motion, rather as if the subject's horoscope had been printed there.

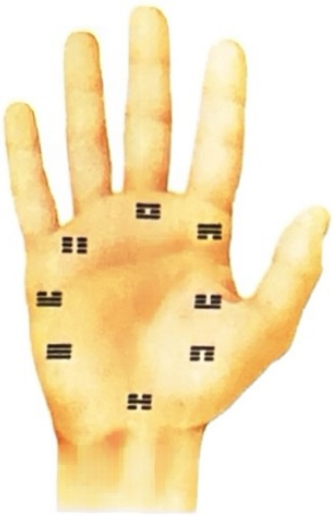
But whatever credence we may give to the interpretations placed upon individual lines



of the hand, there are other tenets of palmistry that are borne out by both popular and medical belief. Palmists place great importance on the form of the whole hand: its shape, its moistness or dryness, its relative fleshiness, the length and shape of the fingers, and the relationship of the thumb and fingers to the palm. And isn't this just what we all do – even subliminally – when we judge an individual's personality, and even the state of their health, from the touch of their hands?

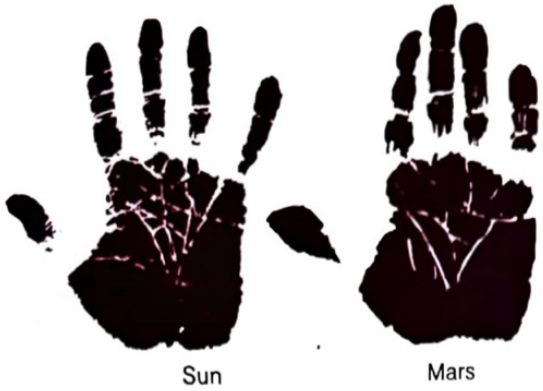
There are a number of different methods of classification of the basic shape of the hand. The German Carl Carus proposed four types, which he named 'elementary', 'motoric', 'sensitive' and 'psychic'; the Frenchman Casimir d'Arpentigny increased this to seven, the 'elementary', 'square' (or 'useful'), 'spatulative' (or 'necessary'), 'philosophic', 'conic', (or 'artistic'), 'psychic and 'mixed' hands.

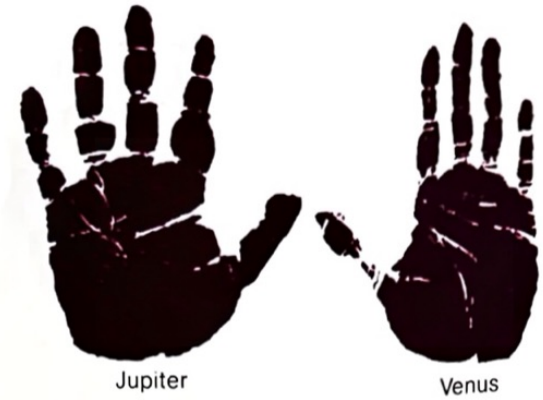
Under the pseudonym of le Comte de St Germain, a late-19th-century writer expanded these to 14, including such oddities as the Congenital Idiot's hand and the Brutal Murderer's hand. In the 20th century, however, the tendency has been to reduce the number of shapes once more to four; a popular classification has been into Earth, Air, Fire and Water hands.



Above: the eight 'Palaces' of the hand in the Chinese system. Clockwise from the Mount of the Moon, these are: Ch'ien, for spiritual force; Tui, for sexual delight; K'un, for passivity; Li, for social and financial standing; Sun, for mental capacity; Chen, for energy and vitality; Ken, for obstinacy; and K'an, for difficulties to be faced

Above right: lines of the hand according to present-day practice





Left: classification of hand shapes on astrological principles. The Lunar hand is soft, with many lines: it indicates a restless but easygoing nature. The Mercurial hand, with its long finger of Mercury, denotes intellectual ability and quick wits. The Solar hand, with strong, short fingers, indicates ambition and trustworthiness. The Venusian hand, with its prominent Mount of Venus, is a sign of a cheerful and extrovert personality. The Martial hand has a very developed thumb and denotes courage and energy. The Jupiterian hand, with its thick and heavy fingers, is a sign of even temper and generosity. A long finger of Saturn characterises the Saturnine hand, indicating patience and shrewdness. The Earth hand is thick and firm, denoting a generous, slow but sure personality – and a loyal friend

Astrological magic

Classifications of this kind have a certain natural logic to them; it is when we come to the fingers and the 'mounts' of the hand that astrological magic begins to take over. The mounts are the fleshy areas of the hand around the central palm, and each, with its related finger, is associated with one of the planets.

It is interesting to note that the fourth finger, which is associated with Apollo or the Sun, was long believed to have a vein running through it that connected directly to the heart, and it is for this reason that wedding rings are always placed upon this finger.

And so we come to the very complicated markings that appear all over the palm, the wrist and the fingers, and that no two people possess identically. There has been a great

deal of argument among palmists as to the relative significance of the lines on left and right hands respectively, which can differ quite markedly. The commonest (and perhaps the most sensible) theory is that, in a right-handed person whose lines will obviously be affected by the work they do throughout their lives, the lines of the left hand represent the destiny to which they were born, and the lines of the right hand represent what they have made of their life.

The lines of the palm are divided into principal and subsidiary lines. The 15th-century writer Jean d'Indagine recognised only four principal lines: the mensal, or line of Fortune; the line of Life, or line of Heart; the Middle line, which represented the subject's career; and the line of Liver, or Health line.

Indagine's near-contemporary, Bartolomeo Cocle, added a further line, the line of Fate, running from the wrist direct to the finger of Saturn; and later 17th-century writers identified more lines according to our modern nomenclature.

The subsidiary lines, which do not appear on every hand, are the Girdle of Venus, which runs from between the third and fourth fingers to between the first and second fingers; the line of the Sun, which runs from near the wrist to the finger of the Sun; the line of Mars, which runs round the Mount of Venus within the line of Life; the Via Lasciva, which runs parallel to the line of Health further toward the outside of the hand; the line of Intuition, which curves round the Mount of the Moon; and the line of Marriage, which curves across the Mount of Mercury. The Bracelets, which run across the wrist, are taken as indications of the constitution of the subject.

When the palmist has considered the form of the subject's hand, the relative size of the fingers, and the implications of the various lines, he will turn his attention to the many smaller marks that can be found on the palm surface and on the fingers. He will look particularly for marks in the form of a star, a cross, a square, a circle, a triangle, a tripod or a spearhead. 'Islands' or spots that break up the lines also have their significance.

Palmistry, like astrology and geomancy, is also practised in China; although it is interpreted very differently, the readings obtained nevertheless correlate very closely with those arrived at by Western methods.

Chinese palmistry divides the palm into eight 'Palaces', which are designated by the eight trigrams of the *I Ching* described earlier. The procedures of Chinese palmistry are thus quite closely related to the initial stages of Western palmistry, in which particular attention is paid to the shape of the hand; considerably less attention is devoted to the significance of the individual lines, which are seen as defining the areas occupied by the eight Palaces.

With this brief description of the techniques of chiromancy, we come to the end of our consideration of the principal methods of divination practised throughout the world. But there remain perhaps hundreds of minor methods, either peculiar to a particular region, or of such inscrutable complexity that they are understood only by their practitioners.

There are hundreds of textbooks from which the eager enquirer can learn the practice of divination by horoscope, geomancy, the *I Ching*, Tarot cards or palmistry. Those with developed clairvoyant faculties may try 'scrying' with a mirror, a bowl of water or a crystal ball. The businessman who wants advice on his investments, or the general who has hopes of becoming the ruler of his country, no longer expects the diviner to:

> Pour in sow's blood that hath eaten
> Her nine farrow; grease that sweaten
> From the murderer's gibbet throw
> Into the flame.

Below left, a female hand that is both 'psychic' and a typical 'Water' hand, with lunar characteristics. This is a sensitive, changeable person, but the well-developed finger of Jupiter suggests good judgement. The line of Life is strong and well-marked. Although the line of Heart begins quite strongly from below the Mount of Jupiter it breaks before ending, chained, below the Mount of Mercury. It seems as if this person had no one on whom to direct her affection until later life; there is only one 'line of Marriage'. The line of Head begins strongly on the Mount of Jupiter, indicating an ambitious character, but it breaks, revealing inner conflict. The line of Fate begins strongly at the wrist but stops on the line of Heart, perhaps indicating that emotional problems will interfere with her career

Below: hand of a young man before and after psychiatry. The deep line on the Mount of the Moon has almost vanished and the many lines under the finger of Apollo have become one strong line

Occult design

In structures of every kind, from Stonehenge to the pyramids, from church architecture to ancient mazes, the influence of shape, proportion and design on our lives has been acknowledged. We all enjoy looking at beautiful things, but do form and structure have a deeper significance?

A sense of proportion

From time immemorial sacred buildings have been designed to be tangible expressions of Man's intangible beliefs, and a tradition has developed of building in harmony with natural and cosmic laws

MORE THAN 2000 YEARS ago, during the lifetime of the Greek philosopher Plato (*c.* 427–347 BC), the people of Delos were struck down by a terrible pestilence. In despair, they consulted the oracle, and asked what steps they should take to rid themselves of this scourge. The oracle set them a problem to solve: they were to double the volume of a cubic altar, while preserving its cubic shape. The governors of Delos sent to the geometers of the Academy, imploring them to find the answer and save their city from disaster. In fact, to solve the problem it is necessary to find the cube root of two – and, with the mathematics that the ancient Greeks had at their disposal, this was impossible. So it seems that the advice given by the oracle was – to say the least – mischievous; but the story shows how highly geometry was regarded in ancient Greece.

The word 'geometry' means 'measuring the Earth'. The ancient Greek geometers inherited the knowledge of the ancient Egyptians who, in the third millennium BC, first developed the science of geometry as a practical method of surveying land. Every year, the flooding of the river Nile destroyed all boundary markers within its alluvial plain, and these had to be re-established by central government in order to prevent disputes among landowners. The method of surveying had to be simple and accurate – and it had to enable the measurement of both length and area, which required an easy method of producing a right angle.

The Greek island of Delos where, 2400 years ago, the people consulted the oracle to discover what steps they should take to escape from the plague that was ravaging their community, the oracle set them a geometrical problem that they found impossible to solve

The solution adopted by the ancient Egyptians involved two men and a length of rope with 13 knots in it, marking 12 equal divisions. Laid out straight, the rope could be used for measuring distance – and by arranging it in the shape of a triangle, with one side three units long, another four, and another five, a right angle was formed. Using this simple method it was also, of course, easy to lay out rectangles and other more complex geometrical figures – and the method was used, in particular, in laying out the foundations of sacred buildings.

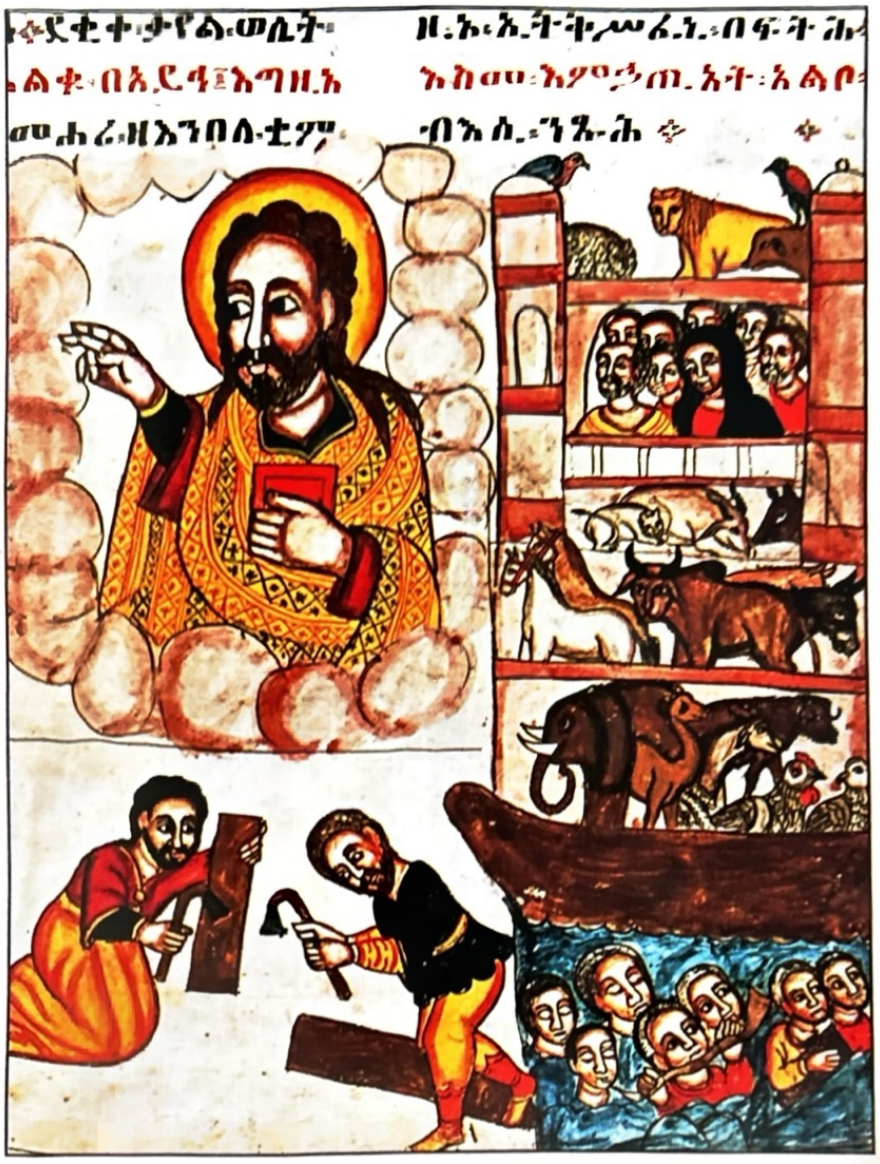
In ancient Egypt organised religion pervaded life to such an extent that almost every

action became a ritual act of worship. The temples and tombs were at the centre of religion, and their laying out was a complex symbolic ceremony. There has been a great deal of speculation about the significance of the dimensions of Egyptian buildings, in particular the pyramids – much of it has turned out to be so fantastic as to be merely amusing – but there is no doubt that every aspect of Egyptian sacred building was infused with symbolism. The practice of 'cording the temple' – laying out its foundations – is described in a wall carving at Dandara:

> The living god, the magnificent son of Asti, nourished by the sublime goddess in the temple, the sovereign of the country, stretches out the rope in joy; with his glance towards the *ak* of the Bull's Foreleg constellation, he establishes the temple-house of the mistress at Dandara, as took place there before.

In other words, the priest fixed the orientation of the temple upon the constellation of the Bull's Foreleg – the constellation we now know as *Ursa major*, the Great Bear. The surveyors then fixed a line at right angles to this one, using the knotted rope to form a right-angled triangle – thus imbuing the building from the very beginning with a rich symbolic meaning.

For measuring and surveying, the ancient Egyptians used a rope (above) divided by knots into 12 sections, with which they could form a right angle. The wall painting (right) from the tomb of Menena at Thebes shows such a knotted rope being used to measure the harvest

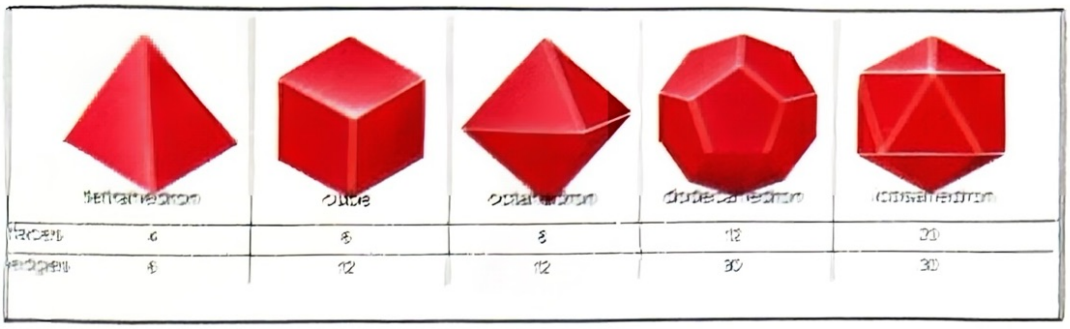


Other cultures chose different ways to enrich their buildings with symbolic meaning. The Tower of Babel, the Babylonian Etemenanki, was designed as a miniature representation of the Universe, with seven stages each representing one of the seven heavens described in Babylonian cosmology. Each of these levels was identified with a planet, and painted in a corresponding colour. The bottom layer was painted black to represent Saturn, the next one orange, for Jupiter, the third red, for Mars, the fourth yellow, for the Sun, the fifth and sixth green and blue for Venus and Mercury, and the top white, probably for the Moon.

Symbolic ark

The Old Testament contains many detailed descriptions of buildings obviously designed as physical expressions of the ancient Jewish art of *gematria*, or number symbolism (see page 80). The dimensions were received by direct revelation from God, and clearly had a transcendent significance. For instance, the instructions for the construction of the ark begin in this way (Genesis 6:14–16):

> And this is the fashion which thou shalt make it of: the length of the ark shall be three hundred cubits, the breadth of it fifty cubits, and the height of it thirty cubits. A window shalt thou make to the ark, and in a cubit shalt thou finish it above; and the door of the ark shalt thou set in the side thereof; with lower, second and third storeys shalt thou make it.



The five shapes known as the Platonic solids, in which all edges and interior angles are equal (left, top), were regarded by Plato as the essential forms that acted as links between the spiritual and physical worlds. It seems probable that these five regular solids were known long before the time of Plato: spherical stones carved in the shape of the five solids have been found in Britain dating from Neolithic times (left, from the Ashmolean Museum, Oxford)

Far left, in this drawing from an Ethiopian manuscript Noah's ark is shown with three storeys: according to qabalistic lore each storey was divided into 11 sections, making a total of 33, a sacred number

In the Hindu tradition *purusha*, or cosmic man, represents the Universe; and the plan of a Hindu temple can be comprehended as accommodating the cosmic human form (below)

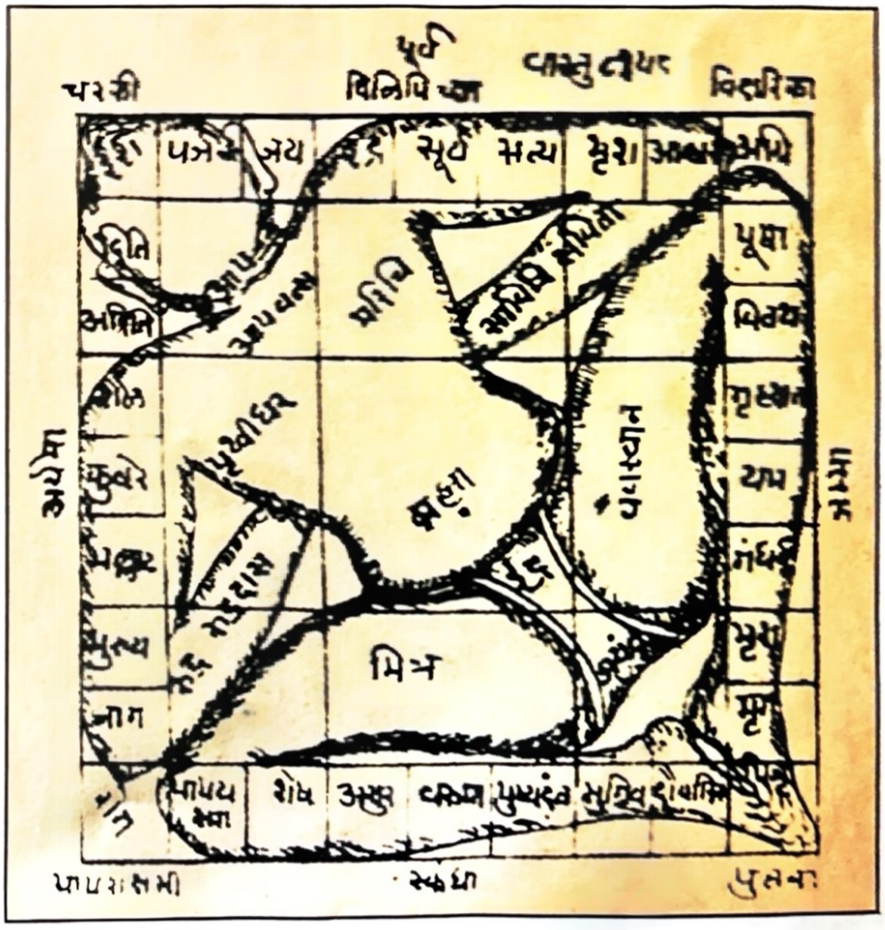
In the qabalistic tradition Noah's ark is divided into three storeys, each with 11 sections, which gives a total of the sacred number 33. The ark has two openings: the main entrance in the lowest storey, through which the animals pass into the plane of physical life, and the small one-cubit window at the top through which the spirit, in the shape of the dove that Noah sends out to look for land at the height of the Flood, is released. In his book *The canon* (1974), William Stirling goes so far as to connect the dimensions of the ark with the size of the planet Earth and the canons of chronology in Hebrew history. He continues,

> If this is correct we must conceive, by the proportions of the ark, the vast figure of a man, in the likeness and the image of God, whose body contains the measure of the sun's path in the ecliptic, the circuit of the Earth, and the orbits of the seven planets.

Fanciful as they may seem, such cosmological schemata can be found throughout ancient architecture, particularly in Egypt and Babylonia. The ark is the image of the righteous man who is taken away from an old and evil world and fitted into a new and god-given plan. Those who fit the cosmic scheme survive; those who do not, perish.

For the ancient Greeks, and Plato in particular, it was in geometry that the harmony of the external world was expressed. For them, the world was governed by the proportions given by the two geometric progressions of the Pythagorean lambda: 1, 2, 4, 8 and 1, 3, 9, 27, and their geometrical counterparts. In the *Timaeus* Plato asserted that the forms that best reflected this harmony were cubes and squares whose sides are in these proportions.

But for the philosophical school that arose after Plato the significance of geometry went much further. For Platonists, geometry accounted for all known states of matter. Especially important were the series of Platonic solids, four of which represented the four elements. The tetrahedron, being the simplest regular geometrical solid, represented fire, the lightest of the elements; the octahedron, bounded by eight equilateral



triangles and considered next in lightness to the tetrahedron, was assigned to air. Then came the cube, a solid and immovable figure that stood for the element earth. And the icosahedron, the 'heaviest' of the regular solids bounded by triangles, represented water.

So, at any rate, went the Platonic canon. An extraordinary footnote to the symbolism of the Platonic solids is the find in Britain of a series of spherical stones, at least a thousand years old, carved to represent the same solids. Megalithic monuments seem to indicate a sophisticated astronomical knowledge on the part of their builders; are we to infer that they were also abstract geometers of some standing?

Harmonious Man

For other civilisations the reflection of divine harmony in the proportions of buildings was a less abstract matter. God made Man – and the proportions of the human body must therefore echo the harmony of the divine plan. A Hindu architectural sutra says 'The Universe is present in the temple by means of proportion' – and the Hindu temple plan is seen as superimposed on the body of the *purusha*, or cosmic man.

In the western tradition the same idea is found in the work of the architectural theoretician Marcus Vitruvius Pollio. More commonly known simply as Vitruvius, this Roman engineer and architect, who worked in the first century BC, codified his rules for good building in his ten books *De architectura* ('Of architecture'). After the fall of the Roman Empire, his books were lost for a millennium until they were rediscovered by the architects of the Renaissance through whom, in their effort to recreate classical architecture, *De architectura* gained a stature far greater than any importance it had had in classical times.

De architectura contains a full account of the principles of architecture, from the education of the architect through the principles of design, the geomantic siting of temples and cities and houses, to painting, machinery and even the martial arts. According to Vitruvius, architecture depends on order, arrangement, eurhythmy – beauty and fitness in the relationship of the parts of the building to the whole – symmetry, propriety and economy.

Eurhythmy is achieved, said Vitruvius, through an elaborate system of proportion. In temples this proportion is to be derived from the proportions of the human body, which, he said, had been 'formed with such

The idea that cosmic harmony was expressed through the human form was take up with enthusiasm by Renaissance designers: Leonardo da Vinci's 'Vitruvian Man' (left) is shown fitted into the cosmic circle, and can be divided in half at the genitals and by the golden section at the navel; Michelangelo's painting of the *Creation of Adam* (below), on the ceiling of the Sistine Chapel in the Vatican, celebrates the beauty of the human body and the essential harmony between God and Man

Above: capitals of columns of the Corinthian, Doric and Ionic orders (left to right). In an influential 10-volume book on architecture, the Roman architect Vitruvius laid down rules for good design – including the correct use of the orders

Right: the Hongkong and Shanghai Bank in Hongkong, shown under construction in 1983. The bank was sited – by its English architect, Norman Foster – to accord with ancient Chinese geomantic principles

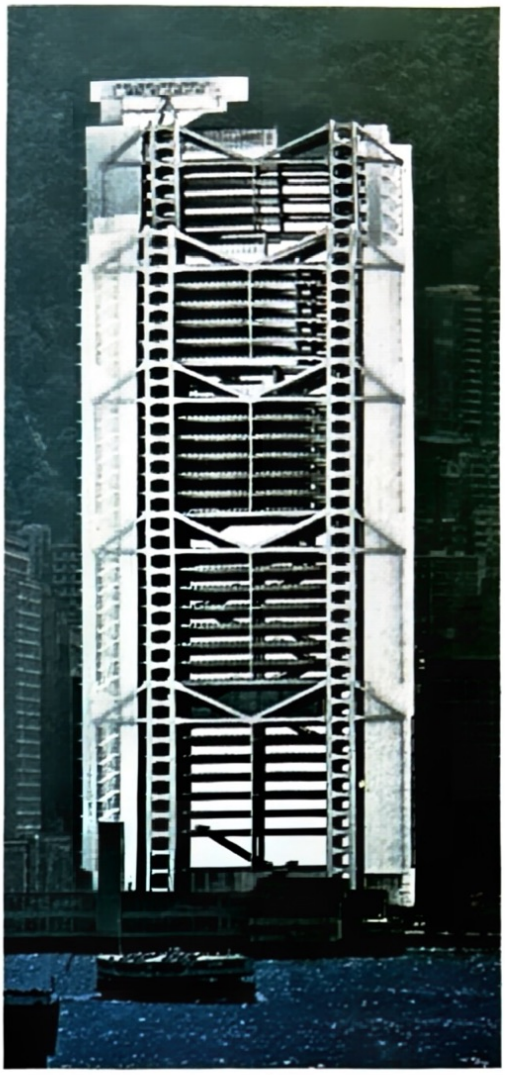
propriety that the several members are commensurate with the whole'. No building, he asserted:

> can possess the attributes of composition in which symmetry and proportion are disregarded [and] unless there exists the perfect conformation of parts which may be observed in a well-formed human being . . .

This foundation of the proportions of architecture on those of the human body was taken up with enthusiasm by the architects of the Renaissance. The proportions were worked out explicitly and in detail, and employed in church façades, in foundations and in paintings. In particular, dimensions were related via geometric and harmonic proportions, and the use of the golden section described earlier. In 1525 a Franciscan monk named Francesco di Giorgio published a treatise entitled *De harmonia mundi totius* ('Concerning the harmony of the whole world') that effectively blended the Platonic geometrical tradition, the Christian qabalistic tradition referred to previously, and Vitruvius's system based on the proportions of the human body.

The quality Vitruvius called propriety was defined by him as that perfection of style that results from the correct construction of a building from canonical principles. It was Vitruvius who recorded the correct rules for building in the classical tradition – rules that allow the symbolism of the buildings to be 'read' in the correct sense. There are, for instance, explicit rules for the use of the various types of classical column – Corinthian, Ionic and Doric – in temples dedicated to the various gods: Doric was to be used for temples in honour of Jupiter, lightning, the heavens, the Sun or Moon, Minerva, Mars or Hercules; Corinthian for Venus, Proserpine, spring water and nymphs; and the Ionic for Juno, Diana, Bacchus and similar gods.

Propriety was also to be achieved by the correct siting of the building. Temples were to be sited in healthy neighbourhoods where suitable springs of fresh water existed, and were to be oriented in such a way that the light could be used to the maximum effect. If this sounds prosaic, it should be remembered that these are among the considerations of good building everywhere and at all times. The ancient Chinese art of geomancy, *feng-shui* was and is, as we have seen, concerned precisely with such questions – *feng-shui* means simply 'wind and water'. It is essentially a method of ensuring the propitious siting of buildings in the surrounding physical terrain. To the ancient mind, however, such propitious building was not merely a matter of analysing the physical characteristics of the surrounding countryside. Buildings were also designed to reflect their harmony with Man and the Universe.



Figures of fun?

In this 16th-century drawing arithmetic is personified as a woman (centre) with the Pythagorean lambda (geometric progressions) on her skirts

Sacred geometry is an ancient and honourable tradition – but a modern offshoot attempts to attach occult significance to perfectly ordinary mathematics. This is particularly true of the golden section (see page 84), because of the apparently mysterious way in which it pervades nature. And the fact that the golden ratio φ ('phi') obeys the rule $\varphi^2 = \varphi + 1$, linking the processes of multiplication and addition, has given rise to the following mystical idea:

'If the transformative power of redemption is fixed to the material cross, the cross of addition +, then the moment of resurrection comes when this principle [$\varphi^2 = \varphi + 1$] allows the cross to fall + ×, and an exponential growth occurs, an incomprehensible, non-sequential leap to another level of being.'

Such theories do little to elucidate the real meanings of sacred geometry.

Celestial harmonies

e esoteric symbolic language of ines and solids used in the nstruction of sacred buildings n be understood only by those tiated into its significance. s secret geometric code is erent in the fabric of ancient rches

NG THE HOPI INDIAN TRIBE of North erica the timing of many religious cere- ies is determined by the alignment of the . At particular seasons of the year, the sts and chosen members of the tribe end into underground shrines, known as s, and watch the passage of the stars ugh the vertical entrance slit. Rituals are rmed during the time that it takes the ant constellation to pass overhead. The tion of the entire ceremony, as well as its ng, is thus determined by astronomical – astrological – conditions.

he motives of the megalith builders in pe have been the subject of much con- re, but it seems reasonable to suppose the megalithic monuments were con- ted for a similar purpose. The stars were certainly studied for practical purposes in ancient societies, and not merely for the timing of religious ceremonies; in ancient Babylonia, for example, the time for sowing crops was the 40 days during which the Pleiades were invisible. And research in Britain by, among others, Sir Norman Lockyer and Professor Alexander Thom suggests strongly that megalithic monuments are subtly aligned to form observatories from which the movement of the stars could be accurately charted.

The Christian missionaries who evangelised Britain during the seventh and eighth centuries found a country of heathens who

This megalithic tomb at Maes Howe, Orkney, was carefully aligned so that the setting Sun would shine down the long entrance passage only at the winter solstice. Christianity also aligned its buildings by the Sun, and assimilated other pagan practices. A painting (below, by an unknown 16th-century artist) of St Geneviève sitting in a megalithic stone circle dramatically illustrates the blending of Christian and pagan elements

Right: two members of the warlike order of Knights Templar dressed for battle (in an 18th-century engraving)

Below: St George and the dragon, in a 17th-century icon from Bulgaria

worshipped a confused pantheon of gods – a mixture of Celtic and Roman gods and deities of more ancient origin. The missionaries feared that their Christian God would be adopted as just one more divinity on a level with all the others. Indeed, many Christian feasts and rituals were taken from, and celebrated as thinly disguised versions of, pagan counterparts: well into the medieval period pre-Christian festivals at the equinoxes or solstices were celebrated with dancing in churches or churchyards, often led – despite repeated injunctions by higher Church authorities – by the priests.

The custom of dancing at the ancient sacred sites marked by megalithic monuments also persisted, much to the dismay of

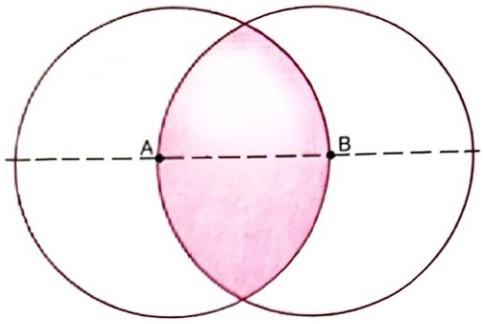
Right: the 13th-century Templar chapel at Vera Cruz, Segovia

Below: the cruciform plan of Chartres cathedral symbolises both the crucifixion of Christ and the body of Man, made in the image of God

the Church, which regarded the continuance of pagan religious practices as a direct threat to itself, and was at pains to stamp them out. For this reason churches were often built on the sites of ancient pagan monuments; and were frequently dedicated to St George or St Michael, both of whom were dragon-slayers – the dragon being the symbol of the 'old religion'.

Even though churches were built on ancient sacred sites to eradicate pagan influences, church architecture, curiously enough, preserved at least one pagan element: the practice of precise astronomical alignment. Following the ancient tradition of the sacred geometry of the temples of Greece and Egypt (see page 107), churches were built on an axis that pointed, not due east, but in the direction of sunrise on the morning of the feast-day of the saint to whom the church was dedicated. When this axis had been determined, the master mason and his assistants would lay out the foundations of the church using a knotted cord, just as their ancient Egyptian counterparts had done.

Fishy business



The sacred symbol of the *vesica piscis* (literally 'fish bladder') is a crucial motif appearing in medieval churches throughout Europe (as in the 12th-century decoration of a reliquary at Limoges, above right). The shape is formed by the intersection of two circles of equal radius, the centre of each lying on the circumference of the other (above). Using the *vesica piscis* it is possible to construct, with only a ruler and compasses, all the regular figures of plane geometry, and so the figure was extensively used in the laying out of sacred buildings.

Perhaps because of this, the *vesica piscis* is seen as the symbol of creation and regeneration – and has even represented the genitals of the Mother Goddess, from whom all physical life springs.

The Christian Church has regarded the *vesica piscis* as a symbol of Christ, because of its fish shape, which was used by early Christians as a secret sign for Christ. The symbolism is reinforced by the overlapping circles that compose the figure: Christ is seen as the meeting point of heaven and earth, spiritual and material, creator and created.

From the alignment of their foundations onwards, then, medieval churches were designed to harmonise with the world as medieval Man perceived it. As Nigel Pennick remarks in *Sacred geometry* (1980):

> Physical manifestations of the *summa theologiae*, the microcosmic embodiment of the created universe, cathedrals in their perfect completed form, united in their position, orientation, geometry, proportion and symbolism, attempt to create the Great Work – the unification of man with God.

True enough, the physical fabric of the church was, to the medieval mind, a rich metaphor of the world as organised religion taught man to see it. The traditional nave-and-transepts plan of most churches reflected the fundamental symbol of Christianity – the Latin cross. It also represented the human form. The French theologian Durandus of St Pourçain (*c.* 1270–1334) wrote in *Rationale divinorum officiorum* ('Explanation of the divine office'):

> The arrangement of a material church resembles that of the human body; the chancel . . . represents the head, the transepts, the hands and arms, and the remainder – towards the west – the rest of the body. The sacrifice of the altar denotes the vows of the heart.

By the Renaissance, architectural theorists were using similar arguments to insist that the *only* correct form for church design was the nave-and-transepts plan; among them was Pietro Catanco who argued, in *I quattro libri dell' architettura* ('Four books of architecture'), published in 1554, that the temple was symbolic of the body of God, and that churches should also celebrate the crucified Christ and therefore take the shape of the cross; thus the church would represent both the body of Man (made in the image of God) and the crucifixion of Christ.

A separate, but parallel, tradition of building round churches came to be regarded, in consequence, as heretical. These churches represent the *imago mundi* (image of the world), and they hold a special place in Christian architecture; the form chosen for the Church of the Holy Sepulchre, which marked the tomb of Christ and (it was believed) the centre of the world, was circular.

In the late medieval period round churches became associated with the fabulously wealthy and powerful military order of the Knights Templar. When the order was brutally suppressed in 1312, its members were accused of numerous heresies – and their form of church-building, too, was branded as heretical.

A battle for souls

Unlike the nave-and-transepts design, the round form did not represent the body of a man, the body of God, or the cross on which Christ was crucified. It represented, instead, the physical universe – the domain of ma-

terial and ungodly forces. The Templars believed that the place of God in the Universe had been usurped by his evil counterpart, the *Rex mundi* (king of the world), and that these two waged an incessant battle over men's souls in which it was by no means certain that good would win. At the centre of Templar churches stood an altar in the form of a perfect cube, symbol of the Earth within the heavens. It was this open representation of the god of material forces at the centre of Templar churches that so offended the established Church.

Sacred symbolism

With the suppression of the Templars, the building of round churches virtually ceased until Renaissance architects reintroduced the form following their study of certain classical temples. It was soon suppressed again by Church authorities, on the grounds that pagan designs should not be used for Christian buildings.

That sacred symbolism of this kind was taken very seriously is clear. And medieval churches abounded with paintings and statuary in which more geometrical symbolism was to be found. The circle was the symbol of the infinite Universe – the cosmos – and was the mother of all other geometrical figures; the square represented the microcosm, the finite Earth. The triangle stood for the Holy Trinity – Father, Son and Holy Ghost. The figure of the *vesica piscis* (see box, overleaf) too, had a complex symbolism.

Perfect proportions

In addition to these there were several systems of proportions that, although commonly used in classical and medieval times, did not become fully articulated until the Renaissance. Chief among these were the proportions defined by a triangle whose sides measured three, four and five units, which was derived from the surveying instrument used by the ancient Egyptians; and the so-called golden section (see page 84), known since the time of Euclid. And there were also the harmonic ratios defined by the Pythagorean lambda.

To see just how far such a use of proportion can be taken, it is interesting to consider a document describing the design of the church of San Francesco della Vigna in Venice. The church had been begun in 1534 under the direction of the architect Jacopo Sansovino. But arguments had arisen over the proportional system suitable for such a building, and a Franciscan monk named Francesco di Giorgi was called in to advise.

Giorgi suggested a system of proportion based on the number three – symbolic, of course, of the Trinity, and also the first 'male' number of the Pythagorean system. The overall system was also related to the proportions of Vitruvian Man (see page 107). Heavily symbolic, and rigorously pro-

Above: the remains of the fourth-century BC marble rotunda in the sanctuary of Athena Pronaia at Delphi: of its original 20 Doric columns, three have been re-erected. It was classical Greek buildings such as this that inspired the Renaissance architects to revive the round form in church architecture: Bramante's little Tempietto church in Rome (completed 1502) exhibits many classical features (right)

portional (for those who could appreciate its abstract language), this design system was approved by the painter Titian, the architect Serlio and the humanist philosopher Fortunio Spira. The façade of the church was completed 30 years later by Palladio – who used the very same system of proportion.

The shape of truth

The ancient tradition of sacred geometry can be read as an attempt to make the buildings of Man harmonise with the world in which he finds himself, and to be physical expressions of fundamental truths, both temporal and eternal. In the modern occult tradition sacred geometry has an explicit foundation in the natural world: the blurb to Nigel Pennick's *Sacred geometry* says

> Geometry underlies the structure of all things – from galaxies to molecules. Each time a geometrical form is created, an expression of this universal oneness is made. . . . Sacred geometry is responsible for the feeling of awe generated by a gothic cathedral as well as for the 'rightness' of a Georgian drawing-room.

Examples cited to support this include the beautiful double-helix form of the DNA (deoxyribonucleic acid) molecule; the manifestation of the logarithmic spiral (based ultimately upon the golden ratio) in the shell of the nautilus mollusc; and the appearance of harmonic intervals (similar to those in music) in atomic energy levels: all these are manifestations of a transcendent geometrical order. This belief has yet to be proved by science; what is beyond doubt is the beauty of the material language it has generated.

Above: a painting by Canaletto (1697–1768) of the church of San Francesco della Vigna in Venice, the design of which was based on the classical proportions of Vitruvian Man

Left: this 18th-century church mural of the Trinity, from Bulgaria, shows the Father, Son and Holy Ghost (represented by a dove) within a circle – the symbol of the cosmos; the square represents the finite Earth within the cosmos

God made manifest?

'To be is to relate' is the central tenet of the bastardised version of sacred geometry that passes for the real thing in some occult circles: every perceived spatial relationship or ratio is significant – and, indeed, any significance the observer cares to perceive is as valid as any other.

The painting of the *Baptism of Christ* (right) by Piero della Francesca (*c.* 1420–1492) was almost certainly constructed with a conscious use of geometry and the golden section. An exhaustive analysis of the painting in terms of the golden ratio, φ, may or may not be instructive; but what illumination is to be gained from the following interpretation of the painting as merely a geometric allegory:

'$1/\varphi^2$ [the Son] is the ideation of divine manifestation. $1/\varphi^3$ is the embodied universal individual, the Christos. The crossing or overlapping of $1/\varphi$ [the Holy Spirit] with $1/\varphi^2$ [the Son] produces $1/\varphi^3$, the embodiment of Divine man.'

Last exit for the lost

The spiralling pattern of the maze or labyrinth is found all over the world. Are mazes designed merely for entertainment – to entrap and bewilder – or do they have an altogether deeper and more ancient significance? Their mystery reaches far back in time

SCATTERED ACROSS the face of Europe, parts of Africa, Asia and the Americas lie hundreds of mazes and labyrinths. Sometimes made of turf, sometimes of hedges, stone or brick, or sometimes simply two-dimensional pictures on mosaic floors, paintings or rock, mazes can be found in almost every kind of setting. The more recent ones, like the ever-popular hedge-maze at Hampton Court or the great picture maze on the floor of Chartres Cathedral, are often displayed in grand and public places. Others are found on remote mountainsides and in hidden spots, like the superb turf-cut spiral Mizmaze near Breamore, Hampshire, which occupies a hidden clearing in the woods. Local traditions suggest that the Breamore Mizmaze, of unknown date but certainly of great antiquity, was once a prominent centre of folk rituals. Yet despite the fading of its original significance, the Mizmaze has retained its fascination and has been dutifully tended and preserved over uncounted generations into the 20th century. In an age of materialism and high technology, the maze has somehow survived as a delightfully irrational and enjoyable symbol of an essential characteristic of the human condition – bewilderment.

The Mizmaze near Breamore, Hampshire, England – a superb turf-cut maze that occupies a hidden woodland clearing. It is impossible to get lost in the maze – the turfs are so low that the exit route is always visible. It seems that the Mizmaze was designed instead for ritual purposes. There was, for instance, a custom of running the maze – it was said that one person could run from here to Gallows Hill, some half a mile (800 metres) away, and back again in the time that it took another runner to complete the circuit of the Mizmaze

Sadly, we are at present far from an understanding of the reasons behind the building of the mazes. The modern fascination with mazes seems to spring largely from the sheer adventure of becoming completely lost, voluntarily, and finding one's way out only after a thrill of fear that one will never do so. An experiment conducted by Ralph Selby in Nottingham in July 1971 highlights the experience: he set up a complex three-dimensional maze. Invited to crawl through one, or both, floors of a two-storey complex (one lit, the other completely dark), built on a tiny site measuring a mere 34 by 17 feet (10 by 5 metres), visitors were bombarded with disorientating information, including bizarre readings from *Alice in Wonderland* and encounters with self-propelling steel spheres. Seven thousand people participated in the experiment; its designer afterwards summarised their reactions:

> I was surprised by the way a usually cynical public was prepared to suspend

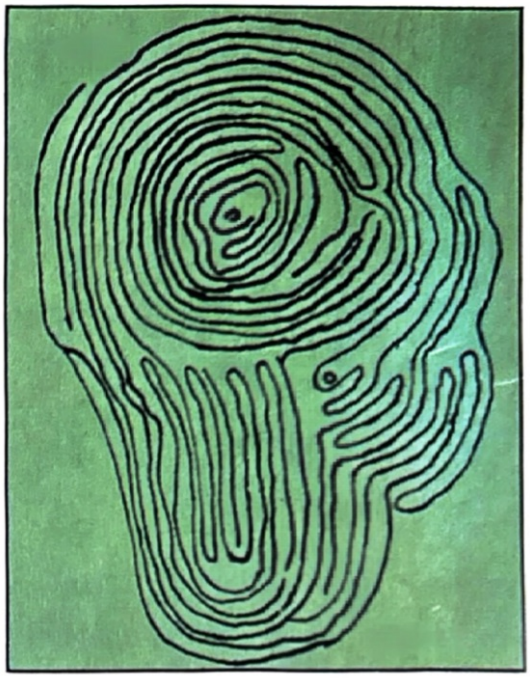
their disbelief – and of course it was the most confident who found themselves more quickly trapped than the cautious. Most visitors reported that moment of heightened awareness of their own reaction, when they realised they couldn't find an immediate exit.

It is possible that heightened awareness obtained in this way is akin to the euphoric giddiness produced by some drugs and was a factor in the religious function of mazes. Certainly spontaneous excitement with a controlled 'unknown' must have stimulated ancient users of maze sites, at which we know the ritual cults involved dance, drama, music and other stimuli. But to attribute the prolific maze-cults of the ancient world simply to a desire to 'get high' may be taking too lightly a solemn cult of ancient Man.

It is just possible to discern, behind the disorderly variety of mazes and labyrinths produced by our ancestors, a meaningful common factor. The main purpose, it seems, was to provide limited access, an entry to a centre cunningly hidden from casual prowlers and penetrable only by the initiated. In the words of Oxford classicist Jackson Knight, 'the primary idea of the labyrinthine form . . . is the exclusion of hostile beings or influences.' In one sense mazes were a symbol of protection, a token 'guard' over the churches, temples, tombs and other sacred places they decorated. Evidently ancient mazes were not simple amusements. But what were they supposed to be guarding? What force, object or idea was potent enough to result in the building of mazes of such similar design over several millennia, from Denmark to South Africa, Spain to India?

The oldest and most famous European maze myth, the Greek story of Theseus and the Minotaur, will perhaps elucidate the problem. Theseus was one of seven youths and seven maidens demanded as tribute by the overlord of Athens, the tyrannical King Minos of Crete. The captives were to be fed as sacrificial victims to the Minotaur, a bull-headed monster who lived at the heart of a gigantic maze, the Cretan labyrinth. This was so complex that even its builder, the legendary architect and inventor Daedalus, had difficulty in finding his way around it; the Athenian victims, once in the labyrinth, would wander hopelessly until the Minotaur caught up with them and devoured them.

Theseus, however, was favoured by the gods, and when he arrived on Crete with the other captives, Minos's daughter Ariadne fell in love with him. Ariadne persuaded Daedalus to reveal the secret of the labyrinth, and at his suggestion gave Theseus a ball of thread, which he trailed from the door of the labyrinth as he entered its sinuous passages. Already an experienced monster-killer, Theseus found the Minotaur in its lair, beat it to death and retraced his steps, following the thread, bringing the other Athenians



Above: a visitor to a maze in an experiment conducted by designer Ralph Selby encounters confusing distortions of himself. Crawling through the complex two-storey maze, many of the participants reported experiencing a moment of heightened awareness when they realised that they could not easily find their way out. Some ancient mazes seem designed to produce the same feeling – perhaps as part of a religious ritual

with him. Then, helped by Ariadne, they escaped to the harbour and sailed for home.

Such is the story of the Cretan labyrinth – but what was its purpose? According to the legendary narrative, the Cretan labyrinth was built simply to house the Minotaur. The existence of the monstrous creature, half man, half bull, wounded the pride of King Minos, for it was the offspring of his own Queen, Pasiphae. She had conceived a passion for, and mated with, a bull – again, with the help of the ingenious Daedalus, who built for Pasiphae a wooden cow, hidden in which she mated with the bull. Outraged, Minos had the labyrinth built to hide the Minotaur,

the result of his wife's scandalous love affair.

There are, of course, some glaring absurdities in the labyrinth legend: since the victims from Athens were publicly rounded up as fodder for the Minotaur, the story that the labyrinth was built as an elaborate way of hiding the monster hardly seems to make any sense. And the narrative of the Cretan labyrinth may be concealing a deeper meaning. For a curiously similar maze tradition from South Africa seems to hint at some more universal significance: a popular Zulu game, played for hours at a time and often while smoking cannabis, is to draw a maze on the ground and to take turns at finding the 'king's hut' marked in the centre without hitting a dead end. Sometimes the game is played with toy armies in the shape of bulls' heads that have to march through the labyrinth to reach an adversary's starting point. Strangely enough, we find in this game, played thousands of miles south of Crete, the same disparate elements that appear in the Minoan legend – kingship, a bull's head and conflict in a labyrinth. We can hardly explain the Zulu myth in terms of King Minos's marital problems – clearly we are dealing with rituals with much broader significance.

Below left: an Athenian vase of the sixth century BC showing Theseus killing the Minotaur, the bull-headed monster that was said to have been imprisoned in a vast maze, the labyrinth on Crete, by Minos, king of the island. According to legend, the Cretan labyrinth was copied from an original in Egypt, where a 'divine' bull (below: the emblem of the god Ptah-Seker-Asari) was ritually killed in place of the sacred pharaoh as a sacrifice for the state. The same disparate elements – the bull, kingship and struggle in a labyrinth – appear in a Zulu game from South Africa. A maze (below far left) is drawn, and toy armies of miniature bulls' heads are marched through it towards a 'king's hut' marked in the centre

The deeper meanings of the labyrinth myth can be elucidated with the help of archaeology. Excavations at the Cretan capital of Knossos at the beginning of the 20th century uncovered evidence of a bull cult practised in a maze-like palace of hundreds of corridors, cloisters and chambers. Scenes on brightly coloured frescoes, dating from around 1400 BC, depict the famous 'bull dance' in which acrobats seized the animal's horns and somersaulted over its back. Tokens of bull worship, such as ceremonial horns, together with other Cretan myths linking the dynasty of Minos with bulls, strongly suggest that the vitality of the Minoan kings, like that of the pharaohs of ancient Egypt, was identified with a bull or bull-god. Thus the search for the source of the 'maze urge' appears to lead us to Egypt, where we may find a common origin for the Cretan and African labyrinths.

Ancient Greek writers actually stated that Daedalus had borrowed his 'invention' of the labyrinth from an original in northern Egypt. Little survives of it today except for a few fragmentary brick courses, but we are lucky enough to have an eyewitness description of its former splendour from the Greek traveller Herodotus, who visited Egypt in the fifth century BC. Somewhat overawed, he commented that 'it must have cost more in money and labour than all the walls and public work of the Greeks put together.' This enormous complex, built by Pharaoh Amenemhet around 1900 BC, consisted of some 3000 rooms, half of which were underground:

> The upper rooms I saw with my own eyes and it is hard to believe they are the work of men; the numerous winding passages through the various courts were an endless wonder to me. I passed from small apartments to spacious halls, and from these to magnificent courts almost without end.

As for its purpose, Herodotus claimed the labyrinth was constructed as a meeting place

A labyrinth carved on a rock face in Rocky Valley, near Tintagel, Cornwall. Identical examples of this, perhaps the most widespread of all the basic maze patterns, are found on ancient coins from Knossos, as a sacred symbol among the Hopi Indians, and as a Manas-Chakra, a religious emblem, in Rajasthan, India

and burial ground for the Egyptian kings. This second, funerary, aspect seems to have been most important – there is archaeological evidence from as long ago as 3000 BC of labyrinths associated with royal tombs. Maze patterns on seals left in graves, convoluted architectural designs surrounding royal tombs and clues preserved in religious texts have been pieced together by Egyptologists to tell a story that may explain the Cretan and Zulu labyrinth traditions. In Egypt, as in many other ancient and similar cultures, the sacred king seems to have been ritually 'killed' as a sacrifice for the state. The sacrifice was, however, only token – a 'divine' bull was substituted for the king in the culmination of several days of ritual dance, drama and combat performed in a labyrinth complex. A similar cult must lie behind the Cretan myth. The Minotaur – the 'bull of Minos' – would have been the representative of the kingship and power of Minos; and Theseus, by killing the bull and taking the king's daughter, was clearly claiming the throne.

In the opinion of ancient historian C. N. Deedes, who studied the evolution of the maze from ancient Egypt to medieval Europe, the plan and meaning of the labyrinth clearly originated in Egypt, where it was the scene of the religious dramas involved in 'killing' the god-king in the shape of a bull. Many other scholars would concur. But although this theory may explain why bull, king and labyrinth occur together in both Crete and Egypt, it does not really explain the importance and meaning of the labyrinth shape itself – or why the same design is found all over the world.

While many archaeologists of the old-fashioned school that believed that all civilisations diffused from ancient Egypt might be content with the idea that the maze pattern and labyrinth cults were derived from Amenemhet's labyrinth, the sheer volume of evidence of an independent maze tradition in Europe suggests that this is not the whole truth. The Egyptian labyrinths were always composed of straight lines, and the abstract mazes on seals were usually made up of square fret patterns. Cretan coins from classical times often depict labyrinths, but while some seem to be of the Egyptian fretwork kind, the maze usually shown is of a quite different construction – the square or rounded spiral design of European tradition, never found in Egypt.

Troy mazes

The spiralling maze – the basic maze of Europe – consists of a series of interlocking concentric bands, often seven in number, with a straight line of exit running from the centre to the base. This is the form taken by practically all the ancient mazes of Europe, including all those known to have been centres of folk activity – festivals, dancing, games – presumably since prehistoric times. As late as the 19th century these mazes were being cut from turf by farmers and peasants in Scotland, Wales and Ireland. They are known locally as 'Troytowns' – for reasons that remain obscure. Spiral maze sites with names apparently derived from the word 'Troy' are found all over Europe – in Wales, England, Italy, Germany, Sweden, Norway and Russia. The Scandinavian examples are usually built from rounded stones set into the ground and are often found by the coast; they are perhaps connected with the megalithic cultures of prehistoric Europe.

These megalithic cultures, it is now widely accepted, developed independently of influence from the ancient Near East and Egypt, and radiocarbon dates now show that many of our oldest megalithic henges and chambered tombs date from between 5000 and 3500 BC, *before* the first flowering of Egyptian civilisation. Since there is absolutely nothing Egyptian about the Troy mazes – and every reason to see them as a part of our megalithic heritage, like Stonehenge or Avebury – any idea of an Egyptian origin must be abandoned. This reasoning is amply confirmed by the spiral symbols, some of them approaching the spiral labyrinth shapes of the later Troy mazes, found carved on the earliest megalithic monuments of Europe. Most of these spiral shapes, strangely enough, are found at tomb sites, such as the magnificent chambered tomb of Newgrange, Ireland, the walls of which are spattered with spiral carvings.

Here, in the maze-like spirals of the megalithic tombs and the labyrinthine structures of Egyptian royal tombs, we find that

Left: a turf maze – untended but still just discernible – at Alkborough, Humberside, and a spiral detail (below) from a kerbstone in the Newgrange passage grave in County Meath, Ireland. The same spiral motif appears in the Nazcan desert lines (bottom) in Peru

two independent aspects of the maze puzzle meet – and that what they have in common is human mortality. What did Theseus find and conquer in the Cretan labyrinth? One obvious answer is death. So was the labyrinth, first and foremost, a symbol of the underworld? Perhaps it was: another Greek myth shows Theseus to be one of the few heroes of the ancient world to have visited Hades and returned. The point that Theseus returned is important. The Egyptian 'killing' of the pharaoh-god, incarnate as a bull, in a labyrinthine structure representing the prison-like underworld, was a ritual meant to ensure the revitalisation rather than destruction of the king's power. Like the god Osiris, he would descend into the land of the dead (at least by proxy, in the form of a bull), only to be resurrected.

From the ancient perspective, the maze was an excellent symbol of the nether world. Once in it, ordinary mortals would be trapped and die; but the initiated could return from the depths and conquer death. The basic maze of Europe and Crete may have been a map of the underworld, but it was essentially a spiral that turned back upon itself, symbolising a return from whatever lay at the centre – even if the way was difficult and hidden. In pre-Christian times, the maze spiral appears to have been used as a symbol of resurrection. But whatever its symbolism, one question remains: why was the maze shape chosen, over again, as a symbol of the meeting of life and death?

A visit to Troytown

Mazes all over Europe, of a curiously similar design, bear the name 'Troy'. Is there a connection with the classical city – or is the link to be found still further back in history? This is one of the most intriguing aspects of the mystery of the labyrinth

THE NAME OF TROY usually conjures up romantic images of the 10 years' struggle between the Greeks and Trojans over the infamously beautiful Helen. This was the Troy immortalised in the epic poetry of Homer. Yet, strangely, the defeated city also seems to have been commemorated in the names of dozens of places scattered over the map of Europe. Often called 'Troytowns', these places are generally not human settlements but mazes, marked out on the ground with stones or lines of turf that, as far as we can judge, may be remnants of a tradition dating back to the megalithic cultures of prehistoric Europe. But why were they built, and what possible connection can the mazes of rural Europe have with the Troy of classical legend?

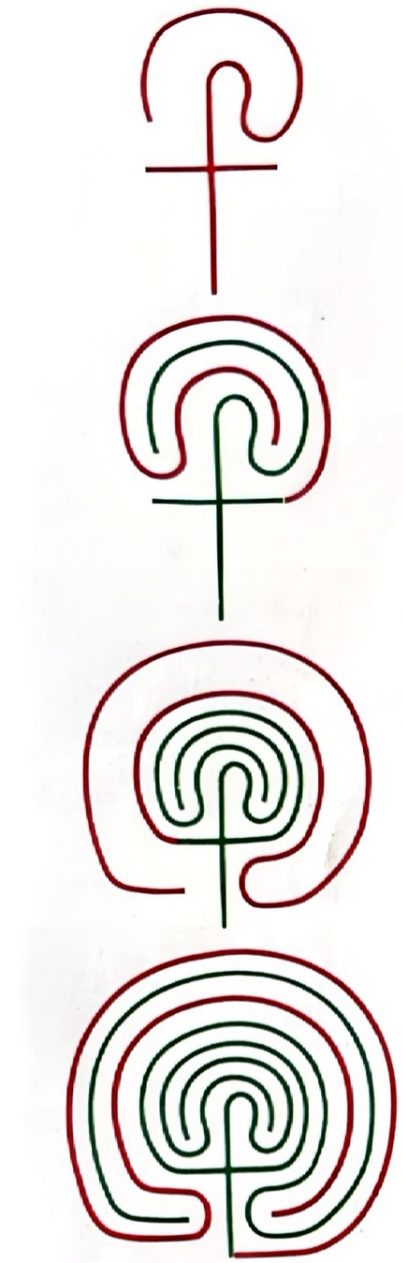
The fragments of traditional lore still associated with the British and continental 'Troytowns' are sparse and tantalising. We have records of the seasonal cutting of so-called 'walls of Troy' from pieces of turf by Welsh shepherds in the 18th century, but no indication of why this was done. In some parts of Britain there was certainly a custom of running the maze; for example, it was said locally at Breamore in Hampshire that one person could run from the 'Mizmaze' there to Gallows Hill some half a mile (800 metres) away and back again in the time that it took another runner to complete the circuit of the maze. The 'Shepherds' Ring' or 'Shepherds' Race' at Boughton Green, Northamptonshire, was once the site of a popular midsummer fair in which the main event was the custom of 'treading' the maze, which was presumably a race of some kind. Other mazes are situated near abbeys – but which is older, the abbey or the maze? The abbey mazes are thought to have had a purely devotional function, providing the monks with a secluded path through which to meander during their meditations.

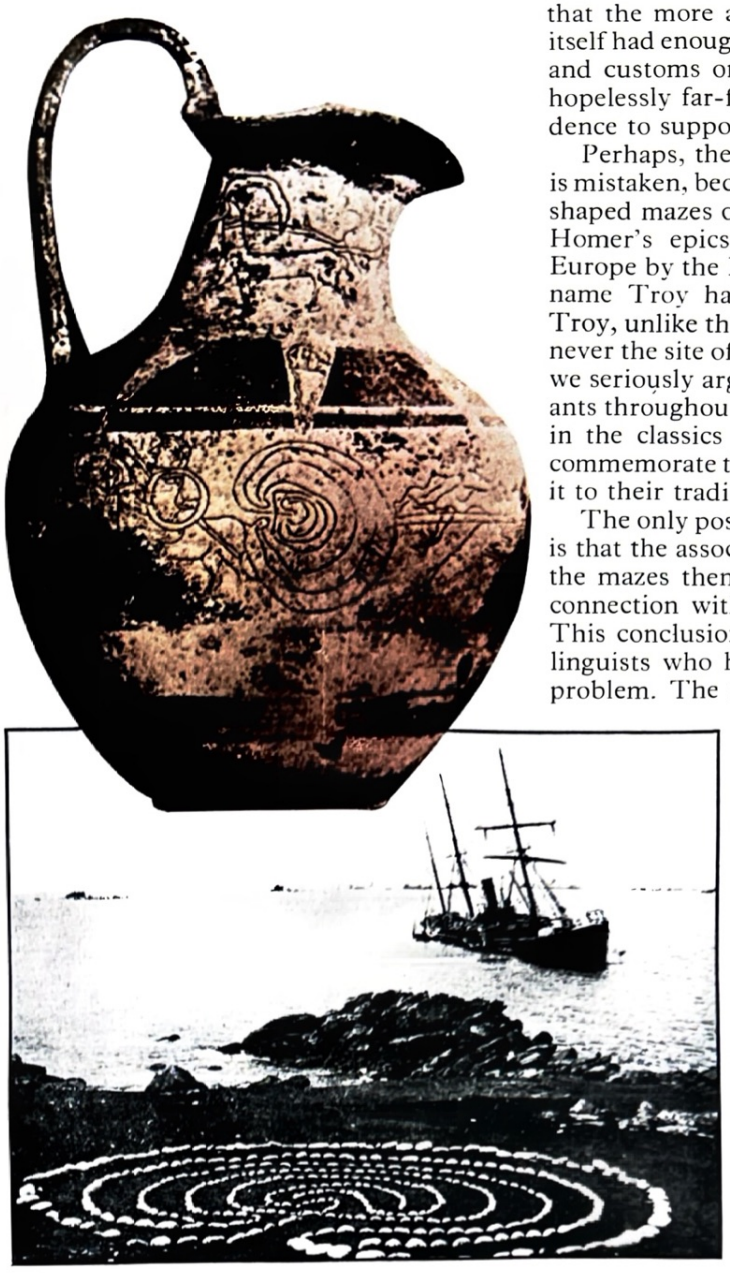
Few of these local traditions have any real substance to them. Rather, the memories that have survived concerning the 'Troytowns' are relics that merely hint of old customs and beliefs without providing any concrete insights. The well-known 18th-century antiquarian William Stukeley commented scathingly: 'The lovers of antiquity, particularly of the inferior class, always speak of 'em with great pleasure as if there was something extraordinary in the thing, tho' they cannot tell what.'

A clue to the original customs performed at the mazes, as well as the Troy association, seems to come from the *Aeneid* by the Roman poet Virgil, who was active in the first century BC. According to legend, the foundations of the later Rome were laid by the fugitive Trojan prince Aeneas, and Rome was the spiritual successor to Troy. A curious passage in the *Aeneid* describes how the hero's son Ascanius led a ceremonial dance of the Trojan youths, in which the weaving, spiralling movements were said to represent the twists and turns of the Cretan labyrinth. This *Troia* or 'Troy game' was performed

Right: stages of development in one of the commonest maze patterns, found in exactly the same form throughout the world. It has been proposed that the shape may be in some way archetypal – a suggestion borne out by an experience related by Geoffrey Russell. One night in 1944 he awoke from sleep with a compulsion to note on paper a design of which he had just dreamed. Over 20 years later he realised the design was the basic maze pattern

The basic maze pattern, in varying degrees of complexity, repeats itself: the turf maze at Troy Farm, Somerton, Oxfordshire (above); the 'City of Troy' turf maze in Brandsby cum Stearsby parish in North Yorkshire (right); and the Troy maze on St Agnes, Scilly Isles (above right), in 1885, with the deserted wreck of the *Earl of Lonsdale* behind it. The recurrence of the name 'Troy' is striking – but can it really indicate a link with the classical city of Troy?





Above left: an Etruscan terracotta wine-jar from around 600 BC, found in Tragliatella, Italy. It shows a warrior on horseback trailing behind him an unmistakable maze shape identical to the 'Troytown' maze designs that are to be found throughout Europe. In the outside layer of the maze stands the word TRUIA. All the clues seem to point to a link between mazes and the city of Troy – but experts believe that the word comes from an ancient Indo-European root meaning 'turning', 'winding' or 'spiralling'

annually at Rome, and evidently became a religious ritual of great importance. As described by the classical scholar Jackson Knight 'the Troia must have been intended to create a magical field of exclusive force, an abstract defensive entanglement.' One illustration of the ritual, on an Etruscan vase dating from around 600 BC, shows a line of warriors, some on horseback and some on foot, trailing behind them an unmistakable maze shape identical to the 'Troytown' labyrinths of Europe. In the last fold of the spiralling maze stands the word TRUIA.

It is easy to infer from all this that the ancient 'Troytowns' were built as centres for the Roman spiralling dance that commemorated the ancestral city of Troy, but such a picture would yield little sense. How could the Romans have spread the 'Troy' maze shape when the oldest spiral and maze patterns are thousands of years older than the Roman Empire? The alternative hypothesis, that the more ancient civilisations of Troy itself had enough influence to stamp its name and customs on prehistoric Europe, seems hopelessly far-fetched, and there is no evidence to support it.

Perhaps, then, the association with Troy is mistaken, becoming linked with the spiral-shaped mazes of Europe after knowledge of Homer's epics had been spread through Europe by the Romans. But why should the name Troy have been chosen for mazes? Troy, unlike the Cretan capital Knossos was never the site of a famous labyrinth. And can we seriously argue that shepherds and peasants throughout Europe were so well-versed in the classics that they were impelled to commemorate the name of Troy by attaching it to their traditional maze sites?

The only possible solution of the problem is that the association with Troy is as old as the mazes themselves and that there is no connection with the famous Homeric city. This conclusion has been reached by most linguists who have tackled the 'Troytown' problem. The reality seems to be that the names are derived from words in Indo-European languages meaning 'to turn' – such as the Latin *troare* the the Celtic root *-tro*. Thus the maze known in Wales as 'Caer Droia' does not signify the 'Castle of Troy', but the 'Castle of Turnings', or 'Turning Castle', an apt enough description of the spiral ground maze. The Roman *Troia* ritual, likewise, may have been named after the spiralling motions of the magical dance, and the connection with Troy may simply be an erudite mistake on the part of the Romans themselves.

Thus the theory that mazes have anything to do with the city of Troy proves to be as much a dead end as the idea that all mazes were derived from an ancient, northern Egyptian labyrinth. It would seem more likely that the maze design arose independently in several different areas. This conclusion seems unavoidable in view of the geographical extent of the basic spiral maze

pattern, which is far more widespread than is generally recognised in academic texts concerning the architectural development of the labyrinth. The same maze shape occurs not only on the classical Cretan coins showing the labyrinth of Minos, but also occurs as a sacred symbol in ancient Rajasthan, India, and even in the New World with the Hopi Indians and among the patterns included in the mysterious and fantastic Nazca desert drawings of Peru.

Attempts have been made to understand the recurrence of the basic maze pattern in terms of psychological archetypes of the kind envisaged by Swiss visionary Carl Jung. An experience related by Geoffrey Russell certainly suggests that the maze design can drift into the human unconscious in a most unexpected way. One day in 1944 he awoke from a dream with the compulsive urge to commit a certain pattern to paper. Nearly two decades later he realised that the drawing, which he had filed in his papers, was identical in design to ancient mazes from both Tintagel in Cornwall and a pattern that appears on the coins of ancient Crete.

Right: the Rollright circle of standing stones in Oxfordshire. Members of the Dragon Project (below) have found spiral 'lines of force' along the surfaces of the stones; and Charles Brooker, in a report published in *New Scientist* in January 1983, told of an experiment in which he had used a gaussmeter to confirm the existence of 'lines of force' spiralling outwards from the centre (below right), sensed by a dowser

Seventh heaven

A unifying theme that lies behind all the ancient mazes and labyrinths is their use as a symbol of the nether world, death and resurrection as we have seen. Even in ancient Babylonia, where there were no labyrinths as such, similar ideas seem to have lain behind the use of the spiral shape. The original Tower of Babel, the Etemenanki of Babylon, was a seven-tier mass of brickwork with a spiral stairway. Its upper half – the seven visible tiers – was thought to symbolise the stages of the upper world of heaven. (Today we still talk of 'seventh heaven', unwittingly following Babylonian tradition.) The subterranean half of Etemenanki (actually largely imaginary) was supposed to mirror the upper part and extend down to the bowels of the underworld, in a seven-level spiral structure similar to the model world above.

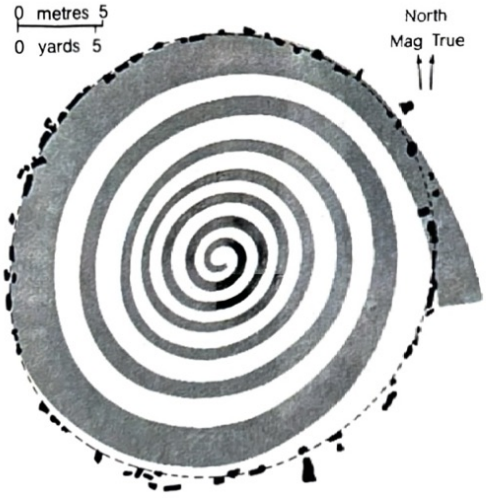
Mazes have, as often as not, seven sets of curves around a central point. If the labyrinth is indeed a symbol of death and resurrection, this recurrence of the number seven forms a striking parallel to the seven-layered underworld of Babylonian thought. Similarly, in an Old Welsh poem *The spoils of Annwn*, telling of a raid by King Arthur and his warriors on a fairyland or underworld, the refrain stresses the fact that only seven men returned. The link with maze mythology is assured by the name given to this otherworld – Caer Sidi or 'Spiral Castle', curiously similar to Caer Droia or 'Turning Castle'. Writer Geoffrey Ashe made a brave attempt to explain the persistent elements behind all these traditions – spiral and circle, maze, underworld and the number seven – by proposing a novel theory in which the 'ancient wisdom' behind the old myths is derived from an original centre of mysticism in the Altai mountains of central Asia. But Ashe's concept of a repository of abstract occult knowledge in prehistoric times does not explain anything; Ashe finds nothing more significant behind the awe in which the number seven is held than a suggested association with the constellation of Pleiades. Something more potent and vital, surely, must have lain behind the 'maze urge'. Ashe himself perhaps points the way when he describes the seven-fold maze as 'an association of "charged" centrality with hard or roundabout access'. Could the circular design of many of the mazes, suggestive of the spiral, have been symbolic of an actual force sensed by ancient Man?

The idea that maze building involved ancient sensitivity to an unknown form of energy was put forward in the 1960s by Guy

Underwood, a dowser whose extensive field work included all the major prehistoric monuments of Britain. Underwood claimed he could detect a lingering energy field rippling through the Earth's surface. This geodetic force channelled itself through underground streams, and prehistoric Man chose to place his sacred sites – mounds or stones – at their confluences. With regard to the maze lore of the ancient world, Underwood's crucial claim was that the mysterious geodetic force often formed spiral shapes under standing stones and stone rings that, through some natural law, twisted into multiples of seven coils.

Underwood's work was idiosyncratic, to say the least, and the word of one dowser alone is, of course, insufficient reason to consider the maze problem solved. But Underwood's claims are backed by dozens of other dowsers for whom the tingling sensations produced by an invisible force at megalithic sites are commonplace. The force, as magnetometer experiments have shown, appears to be part of the Earth's magnetic field. In 1979 an extraordinary, and successful, experiment was carried out on a standing stone by writer Francis Hitching, mathematics professor John Taylor and Bill Lewis, one of Britain's most capable and respected dowsers. Lewis's claim that he could detect a band of force spiralling up the stone in seven coils was apparently confirmed by the readings of a gaussmeter, which registered anomalously high magnetic strengths at the points where Lewis had marked the stone.

Early in 1983 *New Scientist* carried a report of some even more startling results achieved by engineer Charles Brooker at the Rollright Stones in Oxfordshire. Using a magnetometer, Brooker found distinct fluctuations in the geomagnetic field within the stone circle and was surprised to find that a local dowser also 'reported tingling sensations exactly where the recording magnetometer produced blips on the chart'. Brooker then conducted a more detailed survey and discovered that the 'magnetic pattern inside the stone circle forms a seven ring spiral, broadening as it moves outward until it leaves the circle. . . .' Brooker's conclusion – though he remains baffled by the implications – is that the stone circles were deliberately set up as 'magnetic refuges – Stone Age Faraday cages'. Here we find the idea of containment or protection that is so conspicuous in the maze symbol.



Below: the 'Shepherd's Ring' maze at Boughton Green, Northamptonshire, once the site of a midsummer fair in which the main event was 'treading' the maze – presumably some kind of race. The inside of the maze is spiral in shape, the outer parts taking the form of concentric circles. Not all mazes are, strictly speaking, spiral; however, scientific research such as Booker's suggests that they are all built to imitate, or perhaps to control, the local geomagnetic field

Maze urge

The idea that the ancients were aware of a force as subtle as the Earth's magnetic field seems bizarre from a 20th-century perspective. Yet Brooker's discovery – and there is no good reason to doubt it – of a seven-ring magnetic field at Rollright provides the first neat explanation for the 'maze urge', tying together the spiral shape, the underworld connotations (perhaps derived from the magnetic forces inside the Earth), the standing stones and the ubiquitous number seven. No other force or idea has been suggested that makes such coherent sense of all the strands in the maze puzzle. We are obliged to consider the idea that some understanding of the Earth's magnetic field lay behind the maze cult and, more generally, the ancient fascination with spirals of seven coils.

Were the spiralling maze-like dances such as the *Troia* performed and the spiral and circular structures built simply to imitate geomagnetic eddies – or, as appears to be the case at Rollright, to contain and control them? What significance did the geomagnetic field have to the ancients, that it evoked such important symbols of life and death? What precisely the ancients knew, or how they used or hoped to use geomagnetic forces is, for the present, unfathomable. The spiral forms manifested by the Earth's field are only now being rediscovered with the aid of magnetometers and the pioneering work of scientists like Brooker. The ancient maze patterns, as well as being eloquent symbols of ancient cosmology and ritual, may well be evidence of an older and more intimate acquaintance than our own with the magnetic forces inherent in the Earth.

Ritual and magic

Every society is structured around rites, ceremonies and sacred objects. Those that involve the ritual performance of the sexual act, the worship of the lance that pierced Christ's side or the existence of the living dead are among the strangest and most disturbing of all.

Right: Alphonse-Louis Constant, better known as the magical writer Eliphas Levi, as a young man. Constantly searching for a cause, Levi had devoted himself to the Church, then to revolutionary politics, but it was only when he met the exiled Polish mystic J. M. Hoene-Wronski (below) that he found his life's work – to become the world's foremost ritual magician

Laying down the lore

Modern students of the occult often cite the 19th-century French writer Eliphas Levi as an authority. But Levi's own background in magic was far from the scholarly work it was deemed to be

AT THE PRESENT day every great city of the Western world has a Polish community, men and women exiled from their homeland because of their opposition to the Polish government and its Russian masters. The situation was similar throughout much of the 19th century. Numbers of these exiles lived in Paris: some took refuge in political plotting, others in mystical dreams, seeing Poland as the 'Messiah nation', a sacrificial victim whose sufferings would redeem the rest of Europe.

Among these latter was J.M. Hoene-Wronski (1776–1853), perhaps the oddest dreamer of them all, the first occult teacher to inspire the French writer who called himself Eliphas Levi. Wronski was originally a soldier by profession, but abandoned the military life for philosophy and science and made his way to France, where he supported himself by taking mathematical pupils. By 1810 he had come to believe that he had 'discovered the Absolute' – in other words, that he had come, through reason, to a perfect understanding of the nature of ultimate reality and truth. He expressed this supposed 'understanding' in mathematical formulae that proved incomprehensible not only to laymen but to other mathematicians. Nevertheless, so convinced was he of his own genius that he visited London in order to petition Parliament for grants and subsidies. Here he made such a nuisance of himself that one distinguished mathematician, a member of the scientific committee known as the Board of Longitude, opined that 'in the interests of social order one must hope that Wronski will one night go to bed and not wake up again the next day.' This gentleman's distaste for Wronski would probably have been even stronger if he had realised that the Polish savant was an occultist and mystic, a student of such strange subjects as gnosticism and qabalism, who believed that

by means of mystical processes ordinary human beings could attain God-like powers.

In 1850 Wronski met Alphonse-Louis Constant (1810–1875), better known as Eliphas Levi, a hack journalist who had once trained for the priesthood but had lost his faith, dabbled in revolutionary politics and become disillusioned, and was looking for a new set of beliefs that would give meaning to a purposeless existence. To Levi – to use the name he adopted – Wronski expounded his doctrine of the Absolute, his belief that Poland was 'the Christ of Europe', his interpretations of the *qabalah* and other mystical systems, and his belief that, through the practice of ritual magic, men could attain semi-divinity.

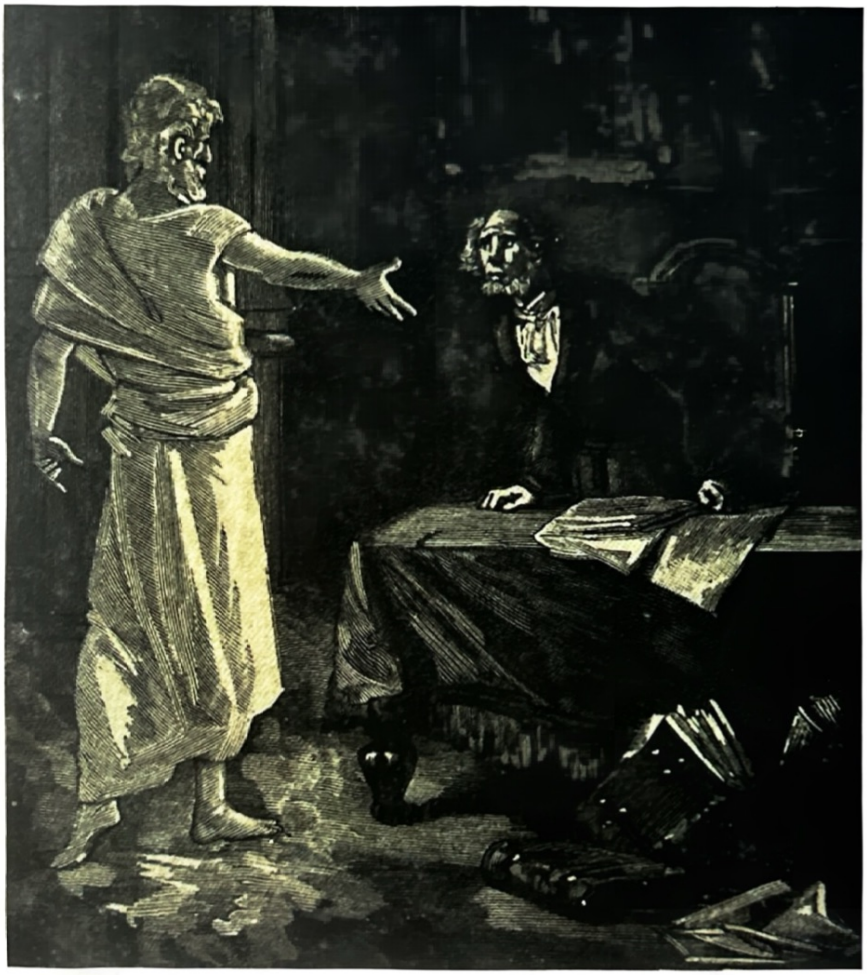
Levi was captivated. He threw himself into the study of all the 'occult sciences', from alchemy to cartomancy, from magic to astrology. He rifled the libraries of Paris for esoteric books and manuscripts, reading them voraciously, and spent many hours with obscure soothsayers, diviners, magicians and self-appointed prophets, hoping to extract wisdom from his long and often pointless conversations with them. He came to believe that the ancient texts of alchemy and magic were written in a symbolic code, and that if he could only break this code he would learn the ultimate secrets of the Universe and become the custodian of spiritual truths beside which the discoveries and interpretations of Wronski would pale into insignificance.

In 1853 Wronski died, mourned – but not deeply regretted – by Levi, who by this time believed that he had already surpassed his former master and was well on the way to receiving some great spiritual revelation. A year later, in 1854, he decided that his researches were sufficiently advanced for him to carry out an occult experiment – the 'evocation to visible appearance' of the spirit of Apollonius of Tyana, a philosopher and wonder-worker of the first century.

Levi recorded that he prefaced this rite by three weeks of preparation and purification – eating only vegetables, avoiding other people, and carrying on imaginary conversations with the long dead sage.

The preparations over, Levi, clad in white vestments and wearing on his head a wreath of vervain entwined with a golden chain, began the ceremony by lighting charcoal fires in two copper chafing dishes. On these he burned various types of incense, their heavy smoke designed to provide the material from which the spirit of the philosopher could build himself a 'body'. Levi began to read the words of the ritual he was employing. Then, as he stated:

> The smoke spread . . . floating above the altar . . . I heaped more fuel and



Below: Levi undertakes the supreme magical rite – the 'evocation to visible appearance' of the 1st-century sage, Apollonius of Tyana. After lengthy and peculiar preparations Levi evoked Apollonius three times on consecutive days in order to ask the spirit profound questions on the nature of the Universe. Apparently the apparition complied, but unfortunately Levi did not record the conversations

With due ceremony

Eliphas Levi, who was born in 1810, grew up and spent his adult life in a period characterised by an all-pervading romanticism – which often degenerated into a frantic search for the merely picturesque, or the abnormal.

By the time Levi was 30 the Romantic movement dominated the cultural life of France – and Levi was ensnared by it, being a man with a desperate need to believe; he could not face the world without holding up some ideological banner inscribed with 'the truth'. The nature of this 'truth' changed as Levi grew older; as an adolescent he found it in romanticised Catholicism, as a young man in an equally romanticised revolutionary Socialism, and for his last 20 years or so in a grossly distorted, 'picturesque' interpretation of the occult tradition of the Western world.

This was shaped by Levi's wide reading, uncritical acceptance of the assertions of unscholarly historians, and his remarkable capacity for self-deception (shared by the later occultist Aleister Crowley, the 'Beast', who believed he was the reincarnation of Levi, whom he eclipsed in learning).

Levi's written statements regarding

perfume upon the chafing dishes. . . I beheld distinctly before the altar, the figure of a man of more than normal size. . . . Three times, with closed eyes, I invoked Apollonius. When I again looked there was a man in front of me, wrapped from head to foot in a shroud. . . . I experienced an abnormally cold sensation, and when I endeavoured to question the phantom I could not utter a syllable. I . . . pointed my magic sword at the figure, mentally commanding it to obey me. . . . The form became vague and suddenly vanished. I ordered it to return and presently felt, as it were, a breath close by me; something touched the hand with which I was holding the sword, and immediately my forearm became numb. I guessed that the sword displeased the spirit, and I placed its point downward, close by me, within the circle. . . . I experienced such a weakness in all my limbs, and a fainting sensation came so quickly over me, that I sat down, whereupon I fell into a profound lethargy accompanied by dreams of which I had only a confused recollection when I recovered consciousness. . . .

The spirit of Apollonius did not speak to Levi, but the answers to the two questions he had intended to ask it, one on behalf of a friend, one on his own account, came into his mind. The reply to the friend, who had asked about someone's health, was 'Death'; the answer to his own (unrecorded) question was similarly gloomy.

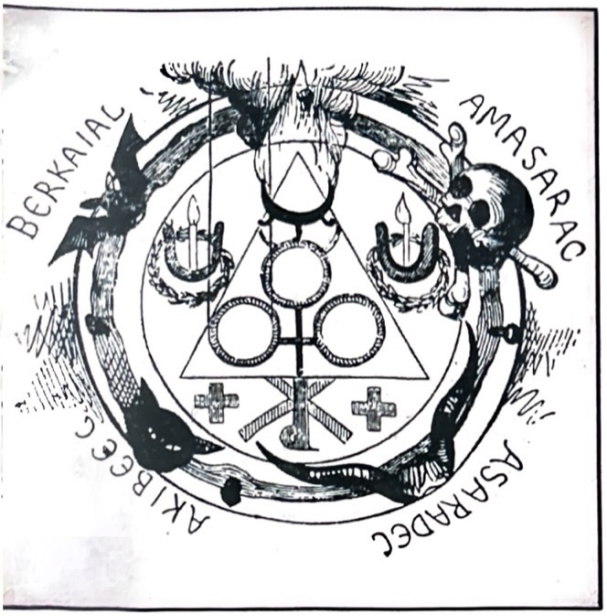
Very secret secrets

Over the next few days Levi twice more evoked Apollonius. Each time, claimed Levi, the sage appeared and gave profound philosophical answers to Levi's equally profound questions. Unfortunately the exact wording, of neither the questions propounded nor the answers received, was recorded, so it is impossible to estimate the truth of Levi's claim that Apollonius revealed secrets 'which might change, in a short time, the foundations and laws of society at large, if they became generally known'.

If the secrets were, indeed, as astonishing as Levi claimed it is rather remarkable that he proceeded to warn others against carrying out similar occult experiments. He wrote:

> . . . I regard the practice as destructive and dangerous. . . . I commend the greatest caution to those who propose devoting themselves to similar experiences; their result is intense exhaustion, and frequently a shock sufficient to occasion illness.

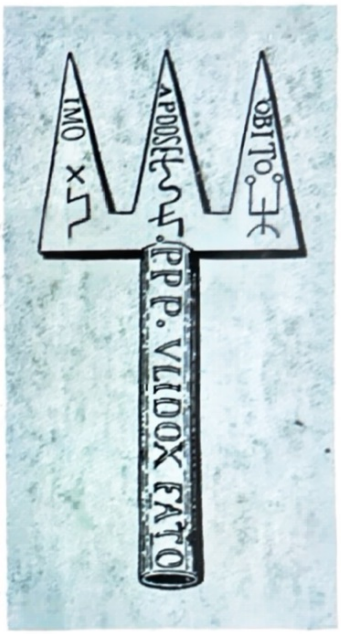
Not many months after his raising of the



the many surviving printed and manuscript *grimoires* – medieval and Renaissance textbooks of ritual magic and occult science – typified his whole attitude. When he quoted from these works he did so selectively and inaccurately, picking out (and heavily amending) passages that were sufficiently romantic to read as though extracted from a particularly lurid Gothic novel. If no passages in any extant grimoire were sufficiently dramatic to suit his purposes he did not scruple to invent them.

Take, for example, Levi's description of the processes involved in 'infernal evocations' – the raising of the denizens of hell to visible appearance. The sorcerer begins, said Levi, with 15 days of a curious dietary observance – getting totally drunk every five days on wine in which hemp and poppy have been infused and which has been strained through a cloth 'woven by a prostitute'. The actual evocation should be carried out in a haunted graveyard or 'the vaults of an abandoned convent' – both, significantly enough, popular settings for Gothic novels. Among the essential requirements for the ceremony were, claimed Levi, such items as 'the head of a black cat which had fed on human flesh for five days, four nails from the coffin of an executed criminal, and the horns of a goat that had experienced sexual intercourse with a young girl' (shown in a magical design, the Goetic circle, left). All this is very melodramatic, but almost none of it was actually derived from the grimoires that were its supposed sources.

Levi's imagination made his books very readable – but valueless as serious studies of the occult tradition.



Above: Levi's version of the 'trident of Paracelsus' to which he attributed extraordinary qabalistic significance. However his misreading of the ancient texts had led him astray – Paracelsus merely regarded the trident as a device to cure sexual impotence brought about by witchcraft

Left Levi's design for the Great Seal of Solomon, sometimes known as the Double Triangle of Solomon. This shows the magician's acknowledgement of the duality of all things – with the good shown above and the evil below – and also the belief that each man reflects the Universe (the 'macrocosm') in himself (the 'microcosm'); thus fulfilling the laws of heaven as expressed in the magical formula 'As above, so below'

ghost of Apollonius to visible appearance Levi published a book entitled *The dogma of high magic*. In this and its sequel, *The ritual of high magic*, published two years later, Levi presented what he claimed to be an accurate account of the theory and practice of alchemy, ceremonial magic, divination and the other 'occult sciences'. In reality these treatises are often grossly inaccurate where matters of fact are concerned. Many of his definitive statements are, quite simply, erroneous. Some of these errors were probably the result of carelessness in the use of manuscripts and other primary sources – Levi was a widely, but not deeply, read man – others can be attributed to deliberate distortion for no other purpose than the production of exciting reading. A particularly gross example is provided by Levi's account of 'the Trident of Paracelsus', a three-pronged fork inscribed with various mystic symbols. Levi asserted that the three prongs represented both the Christian Trinity of Father, Son and Holy Ghost and the alchemical elements (principles) of salt, sulphur and mercury. The trident expressed, Levi added:

> . . . the synthesis of the Trinity in Unity. . . . Paracelsus ascribed to it all the virtues which cabbalistic Hebrews attribute to the Name of Jehovah and the thaumaturgic [magical] properties of ABRACADABRA, used by the hierophants of Alexandria.

All this is unmitigated rubbish. Paracelsus certainly wrote of this trident; equally certainly he did not attribute to it all the virtues of 'the Name of Jehovah' – he regarded it as a device to be used for the cure of sexual impotence brought about by witchcraft. According to Paracelsus those inflicted in this way should make a trident from an old horseshoe 'on the Day of Venus and in the Hour of Saturn', inscribe it with various occult symbols, and conceal it in the bed of a running stream. 'By this means,' wrote Paracelsus, 'thou shalt be delivered in nine days and the person that has brought this mischief upon thee shall get something himself in that place [the genitals].' All this is very interesting, no doubt – but it is a long way from Levi's 'synthesis of the Trinity in Unity' and 'the thaumaturgic properties of Abracadabra'.

Designs upon the Tarot

On occasion Levi did more than distort the facts – he invented them to suit his purpose. Thus, for example, he wanted to prove that the fortune-telling Tarot cards were known to, and employed by, occultists of the 16th and 17th centuries. He therefore specifically stated that there were references to the Tarot in the writings of such men as Abbot Trithemius, the 16th century scholar, and Knorr von Rosenroth, the 17th century qabalist. In truth there are no such references.

Inaccuracies of this sort flawed all the literary work of Levi; anyone who looks for reliable accounts of the history of Western occultism and the techniques employed by its devotees must seek elsewhere than in the writings of the French magician.

Nevertheless, Levi's *theories* as to how magic supposedly works cannot be neglected. For not only are they interesting in their own right, but they have inspired whole generations of occultists, including the Russian, Madame H.P. Blavatsky and the British

magician Aleister Crowley.

As far as Levi was concerned three fundamental theories – which he called 'dogmas' – explained all allegedly supernatural phenomena, from miraculous healings apparently induced by holy relics to the table-turning of Spiritualist mediums.

The first of these theories is the 'dogma of correspondence', an idea of great antiquity. According to this the soul of a human being is a microcosm, a little universe that properly reflects in miniature the macrocosm, the great universe in which we live. Every factor in the universe has its counterpart in the soul and, by means of traditional occult practices, the magician can change the world outside himself by changing the little world inside.

The link between the inner and outer worlds is the 'astral light', an invisible but all pervading substance whose existence forms the basis of the second of Levi's dogmas. According to Levi this astral (literally 'starry') light has a close relationship to matter, each physical object having an astral twin that is, in a sense, primary – to the mage the world of matter reflects the astral world rather than vice versa. By manipulating the astral light it is possible, said Levi, for the occultist to influence both the physical universe (to tip tables or heal the sick, for example) and the feelings and modes of consciousness of other living beings.

This manipulation can be achieved by the trained human imagination and will; Levi's third fundamental theory is that will and imagination are real natural forces, capable – when properly harnessed – of producing even more spectacular effects than those produced by, say, electricity.

During his lifetime Levi's theories attracted little attention. His books sold only moderately, and he eked out a scanty living by taking 'occult pupils'. And many of his contemporaries regarded him as no more than a charlatan.

Yet he had his disciples, men and women who believed that they had learned much of value from his writings. And there are those in the late 20th century who think the same – Levi's influence has proved an abiding one. In a sense the ghost of Apollonius, raised by Levi well over a century ago, is still with us today – casting a long shadow.

Above: Levi on his deathbed in 1875. Many modern occultists still regard him as one of the world's greatest authorities on the theory and practice of ritual magic, holding in special esteem his writings on the symbolism of the Tarot cards, some of which he designed himself, such as the '14th Key of the Tarot', the card of Temperance from the 22 cards of the Greater Trumps (left). Other occultists have used it as the inspiration for their own cards, such as those designed by the early leader of the Golden Dawn, S. L. MacGregor Mathers (far left) and the modern designer Miranda Payne's pack (right)

Secrets of the sex cults

Above: Shiva, the major male god of Tantra, dancing upon a dwarf demon and encircled by symbols of creation, destruction and rebirth. Tantrism has a whole pantheon of deities and a complex ideology of spiritual fulfilment

Is the cult of Tantra simply an excuse for sexual excesses, as is charged by its critics? Or are its sexual rituals the key to ultimate spiritual salvation, as the practitioners themselves maintain? There is a long history of argument on both sides

THE ENTIRE UNIVERSE is in perfect equilibrium, its two primary polarities precisely balanced – like a god and goddess locked together in divine and intimate union. The highest spiritual goal, therefore, is to attain resonance with that unsurpassable state – through sexual rituals.

So say the followers of Tantra, a cult that originated in the ancient East and that has enjoyed popularity among Western occultists and mystics since at least the end of the 19th century. This cult continues to flourish – largely in secret – in modern-day society.

To the outsider, its rites may seem nothing more than an indulgence in promiscuous and apparently obscene sex. Even worse, perhaps, the rituals seem to smack of utter depravity and black magic. But in its purest sense, Tantrism is nothing of the kind. Tantra, from which the cult's name is derived, is a Sanskrit word meaning 'warp'. It signifies a body of written teaching – the warp – through which are threaded the supplementary oral and physical training and preparation – the weft – needed for the attainment of the personal and direct experience of God, the gods, the Universal Essence, the Ultimate – however the seeker after wisdom and salvation chooses to envisage this awesome goal.

In fact, the sexually explicit, erotic and, to some, disgusting aspects of Tantric rites take up only a small percentage of the entire written texts. Yet it is probably true to say that these practices, and the powers they are supposed to confer, are the main factor in the cult's appeal to Westerners.

Tantrism has almost always been practised in secret. And, in spite of the increased sexual freedom and permissiveness of the late 20th century, it is still a secret cult. Although the oldest texts date back to only around the end of the 10th century, it is said that there were many more ancient ones, which were destroyed by successive invaders of the Indus Valley and by orthodox Hindus

Top and above: erotic sculptures on the Khajuraho temple in India. Despite such open display in art, Tantrics have nearly always practised their sexual rites in secret to escape persecution

who tried to stamp out Tantra. Libraries of Tantric scripts were burned, the cult's monasteries were razed and priests were put to death. Not surprisingly, surviving teachers and followers went into hiding. Tantra, however, has much in it besides the sexual practices that offended the persecutors and appals modern critics.

In Tantric philosophy, the two major gods, who personify the balanced polarities of the cosmos, are Shiva and his consort Shakti. But it is the female, Shakti, who is regarded as the superior of the two because she is seen as the primal, creative, active force – the Mother Goddess, Great Mother or Great Goddess. The Tantrics have no caste system, consider women completely equal to men and, in many rites, envisage the female partner as the physical vehicle of the goddess Shakti herself.

The range of subjects that Tantrism treats is so broad that it covers almost all areas of occult philosophy. These include the creation and ultimate destruction of the world; an entire pantheon of deities and their inner meaning and symbolism; yoga and meditation; astral travel and heightened consciousness; prolonged longevity – and, of course, the sexual rites by which, it is believed, many powers and profound insights may be obtained. More than one commentator has noted that the medieval grimoires and rituals of Western magic and sorcery seem to have been borrowed from Eastern Tantrism and dressed up in Western trappings.

Long and difficult periods of preparation and training are essential for any form of attainment in the Tantric system. There are complex breathing exercises, gestures and postures designed to lead to the control of body temperature, pulse rate and other automatic physical functions. Intense and profound mental exercises are performed, calculated to give the true will total control.

The successful adepts should ultimately be raised mentally, bodily and spiritually to attune their highest, inner essence to the very Quintessence of the Universal Spirit. This is often a religious goal, but there are many who would insist that Tantra is not a true religion.

The texts that describe the necessary techniques of Tantra are couched in highly allegorical and abstruse symbolism, designed to veil the inner meaning. The sections dealing with spiritual alchemy, for example, at first sight appear to be describing nothing more than the physical effort of attempting to transmute base metals into gold. But they are intended to be applied internally.

Internal alchemy

Shakti-yoga is the key to the real alchemical process indicated, and its exercises are based on the concept of the *chakras*, which might be defined as centres. Another name used almost synonymously with chakras is *padmas*, meaning 'lotuses'. Chakras are said to be located inside the body, but are not envisaged as physical organs. Rather they are subtle physical centres of energy, located at the plexuses (nerve centres) of the body.

There are seven major chakras. The lowest of these is the *muladhara*, which is said to lie near the base of the spine. It is here that the feminine, active principle, the goddess Shakti herself, lies dormant. She is symbolised as a sleeping serpent, the *Kundalini* – from *kundala* meaning 'coiled' – and she waits to be awakened and eventually conjoined with Shiva, the male, passive principle.

Shiva, meanwhile, supposedly inhabits the *sahasrara* chakra – the 'thousand-petalled lotus' – in the crown of the head. The way to bring these deities together, say the Tantrics, is to awaken Shakti and cause

Right: the seven chakras (centres of energy), in a 19th-century drawing. The lowest chakra is at the base of the spine, where lies the kundalini, a snake symbolic of the goddess Shakti. Tantrics seek to awaken her and make her move up the body to the god Shiva, the highest chakra in the crown of the head. When this 'divine union' takes place, the Tantric has achieved his final goal – which takes years of rigorous training

her to move gradually up through the five intervening chakras. These are: the *svadhisthana*, above the genital region; the *manipura*, near the navel; the *anahata*, in the heart area; the *akasa*, in the throat; and the *ajna*, somewhere in the region of the pineal gland. This last is the so-called 'third eye', beloved of Eastern and Western mystics alike as an organ of occult vision.

When the kundalini has reached the seventh chakra, Shakti and Shiva are united. The successful adept is then perfectly attuned to the Universe itself. This puts the enlightened one in a superior position to the rest of 'unawakened' mankind, leading as it does to the highest order of wisdom and power. The successful Tantric is, in fact, a part of – and able to manipulate at will – any segment or entity of the entire cosmos. It is a case of salvation through sex.

Above: a Tibetan bronze of the god Hevajra with his goddess Shakti. According to Tantric belief, such divine union keeps the Universe in perfect balance, and the cult's sexual rituals aim to bring the cultists in resonance with this divine equilibrium

But there are many pitfalls in this long, complex and arduous process of Tantric enlightenment and, if not undertaken properly with the aid of a knowledgeable master, its dangers are very real. It is said that if the kundalini force, which is likened to a kind of occult fire, gets out of control, madness or death can result.

Another of the dangers along the way is that aspirants could be diverted by mundane desires, born of their weaknesses and fanned by some of their achievements. The desire for wealth, longevity, power over others, to name a few, may seduce them away from the ultimate goal of divine union. The sexual rites themselves, if not undertaken in the spirit of discipline that is intended, can obsess the practitioner to the point of bodily and mental collapse.

These rites – the target of the severest external criticism – involve nudity, group sex, incest and adultery. But although Tantrism has been described as a cult of ecstasy, it is not merely physical, sensual ecstasy that is paramount. Tantric rituals are deliberately designed to make the selection of a partner arbitrary. There is no emphasis on youth or beauty or mutual attraction.

Above: Lou Nova (right), a boxing champion preparing for a major fight in 1939, taking muscle control instructions from Oom the Omnipotent, founder of an American cult with roots in Tantrism. Oom had a wealthy patron who established a permanent home for the cult in Nyack, New York

At higher levels of attainment, there are even claims of sexual intercourse with goddesses, elementals and female demons. One testimony to this has come from Stephen Jenkins, an English history teacher who was initiated into Tantric sexual ritual in Mongolia. In his book *The undiscovered country* (1977), Jenkins explains that there are two stages in advanced Tantrism, one in which the female partner is an ordinary human being, and another in which she is 'a being of another order altogether'. The latter, he says, can take the form either of a 'skywalker' – spirits said to haunt western India and Ladak – or even of the Great Goddess Shakti herself: 'At the highest level of this particular method, the experience is indistinguishable from normal human intercourse at its intensest and most refined. I do not pretend to know how this works: I can only testify that it does.'

Two paths, one goal

It should be noted here that there are two different schools of Tantric sexual rites, known as the Right-Hand and Left-Hand Paths. It is believed that many of the cults that flourish secretly in the West today adhere to the Left-Hand Path. In Tantrism, this simply means that in rites involving actual physical sex, the prospective female partners sit on the left-hand side of the male practitioners as the rite begins. In the Right-Hand Path, the sexual rites are purely symbolic.

Francis King, an historian of ritual magic, wrote in *Sexuality, magic and perversion* (1971) that Edward Sellon (1818–1886) introduced Tantrism to Britain, although a few English and French academics had shown an interest in Hindu sex religion in the 18th century. Sellon – soldier, fencing master and pornographer – became acquainted with Tantric sexual rites in India, and his *Annotations on the sacred writings of the Hindus* appeared in 1865.

In the United States, possibly the first person to study and practise a form of sexual magic with some Tantric links was Paschal Beverley Randolph (1825–1871). He established various secret groups, one of which is believed to survive in France today. Like some Bengali practitioners of Tantra, Randolph used hallucinogenic drugs in his rites to attain heightened states of consciousness.

Another cult with distinctly Tantric overtones emerged in New York around 1919 under the name of the Brae Burn Club. It was headed by Pierre Bernard, who styled himself 'Oom the Omnipotent', and his wife, one 'Mademoiselle de Vries', a vaudeville dancer whom he had taught oriental dancing and the basics of Tantrism. Mlle de Vries also promoted a 'health system of Tantrism', attracting a succession of society people. Among these was a Vanderbilt, whose family was one of the wealthiest in the country. It was she who arranged for the Bernards to buy a mansion and estate at Nyack, New York, as a permanent home for the cult.

The inner sanctum of this club was the 'Secret Order of Tantrics', whose members came to regard Bernard as a kind of man-god. Bernard and his wife aimed 'to teach men and women to love, and make women feel like queens' – a clear echo of the Tantric belief in the superiority of Shakti. One Tantric aphorism actually says: 'Shiva without Shakti is a corpse.'

Other occult groups had already adopted some of the sex magic associated with Tantra. During the late 19th century, Karl Kellner, a wealthy German industrialist, had established an occult order based upon the sex magic he claimed he had learned while travelling in the East. This group developed into the Ordo Templi Orientis (OTO), branches of which spread throughout Europe and parts of Scandinavia. The magician Aleister Crowley became the leader of the British OTO in 1922, but he moved away from Tantric ideas and introduced elements such as 'magical masturbation' and homosexuality, and added degrees of adeptness of his own invention. He also used sex magic for temporal gain, which was not commensurate with Tantric teaching.

However, branches of the OTO continued to be established – and many still exist today, in the USA as well as Europe: evidence that links with Tantric sexual ritual have survived into the late 20th century.

Right: a 17th-century Tibetan cloth painting of the Tantric Buddhas, including the Knowledge Holder, the Peaceful Buddhas, the Wrathful Buddhas and those presiding over the realms of reincarnation

Look younger, live longer...

Have certain secret cults – based on Tantric sexual rites – found the key to eternal youth? Those who follow them make the amazing claim that these groups can prolong people's natural lives

THERE ARE MANY surviving branches of the occult order called the Ordo Templi Orientis (OTO), which has clear links with Tantra through the practice of sexual rites. There are also numerous claims to its leadership, the most valid of which in Britain is that of Kenneth Grant.

Although most Western writings on Tantra are somewhat vague on the subject of its inner mysteries, Grant's books – known as *The Typhonian trilogy* – go some way towards revealing and analysing the system. In these books, Grant unfolds some of the arcana underlying the symbolism of Left-Handed Tantrism as practised in the West.

The bodily centres of Shakti-yoga previously discussed are referred to both as chakras and as padmas, or lotuses, the lotus being the mystical sacred flower of the Orient. In keeping with the Tantric use of the lotus as the symbol for the female genitalia, Grant interprets it as the 'flower, or flow-er; the flowing one that gathers together all the mystical essences, "stars", or *kalas* of the human body, and conveys them via the pudendum to the sacred leaf ready to receive them.'

Grant explains that the lotus, which is composed of these essences or secretions, 'flowers in the vaginal emanations that flow from the priestess'. These secretions are collected for use in the various magical rites and for the consecration of talismans. Having access to esoteric interpretations of Tantric ritual and practice, Grant quotes from an 'initiated comment on a sacred *tantra*':

> What is not (generally) known is that these secretions are not mere excretions but are valuable fluids which contain in themselves the secretions of the endocrine glands in a much purer form, and more fit for human use than the gland extracts and desiccated gland products of the present-day organotherapy. . . . The secretions of women are made in the laboratory of the Deity, the Temple of the Mother, and they supply just what is needed by the human . . . .
>
> Of the three kinds of fluids the urine is the least and the weakest; *rajas*, or menstrual secretion is next; and *bindhu* – the last, is a secretion not at present known to the West, and obtainable only by means of the *Shakta-Tantra* and their analogies in Mongolia, Tibet, China, Peru, Mexico and elsewhere; a fluid that bisexualises . . . and rejuvenates to an extraordinary extent.

The commentator goes on to say that at least 16 different types of bodily fluid from women are used in the Eastern Tantric system – the sixteenth, *sadhakya kala* (also known as the ray of the Moon), being the most secret. To

The lotus is the mystical sacred flower of the Orient, and the Tantrics use it to symbolise the unfolding of the self and the expanding of consciousness. It is also the Tantric symbol of the chakras, or psychic energy centres, of the human body. Used in this way, each petal signifies the blossoming of a special quality or mental attribute. The height of spiritual fulfilment is symbolised by a thousand-petalled lotus in the crown of the head

lend some support to these assertions, Grant cites Havelock Ellis, the pioneer sexologist. In his book *Studies in the psychology of sex*, Ellis says that only 14 of the bodily secretions known in Tantrism are recognised by Western science.

Exactly how the various 'essences' are obtained and applied, however, is not revealed. Nor are the precise results of their supposed effects. But there are indications that, in some way, they can retard or even halt the ageing process.

One highly secret group that would appear to have been successful in this technique is known as the Cult of Priapus and Ayana, which still functions in Britain, Europe and the United States. The cult was named after two ancient gods. Priapus was the ithyphallic god venerated by the ancient Romans, Etruscans, Greeks and Pompeians because of his overt fertility. His consort Ayana had three breasts. She was regarded as submissive to him.

According to the Roman author, merchant and traveller Lucius Marcellus, the cult's followers would present their daughters to the Temple of Ayana to be trained as priestesses. In return, they would be admitted to the inner sanctum where they were taught magical powers, including the secret of eternal youth.

The onset of Christianity and its persecution of pagan religions caused the cult to go into hiding, and it has remained underground ever since. Like the Tantrics, the Ayana cultists practise indiscriminate sex, incest and other forms of sexual rites considered to be morally degenerate. But despite the persecution of its adherents, the cult apparently survived and later spread.

One of the ways in which the cult stays secret is by dispensing with regular mass gatherings. Its aspirant priestesses are usually trained individually or in small groups of two or three by a priestess with whom they reside. The inner sanctum of the cult's various branches meet only twice a year, and always at different venues.

Kenneth Grant (above), writer and occultist, has the most valid claim to the British leadership of the Ordo Templi Orientis (OTO), which was founded in Germany in the early years of the 20th century. The sexual rites of the order link it to Tantra – and Grant has revealed some of the inner mysteries in a trilogy of books, of which *The magical revival* (above) is the first

The survival of the cult into comtemporary times was discovered in the late 1950s by an American occultist, James McNally. But McNally's discovery was quite by chance and, being a devout Christian, he was horrified at what he saw. Consequently, he uncovered little more about the cult and its activities. Another investigator, Justin C. Tanner, gleaned some additional information. He found that there were three temples of the cult in the United States, one in Denmark, one in Britain, and possibly others.

Yet another researcher, Arnold Weech, gained the confidence of the inner circle of the British temple and, in 1978, published a pamphlet of his assessment of the Cult of Ayana. He reported that he did not think the cult had any powers greater than those claimed by other occult groups he had encountered.

Counting the years

Weech did confirm, however, that the group appeared to have some powers to arrest the ageing process. In his opinion, a further 20 to 40 years could be added to the normal life expectancy, together with the retention of a youthful appearance. When he first encountered what he accepted ultimately as evidence of age retarding, Weech found it difficult to believe. He met a young girl who looked about 18 years of age and 'only after I had met her daughter and granddaughter (who did not possess this power) did I even begin to believe that such a power existed.'

Later, however, Weech met another member of the cult, a man who appeared to be in his mid-thirties, 'and by sheer chance I was able to check and completely confirm his claim that he was born before the turn of the century.' The man mentioned that he had served on HMS *Iron Duke* during the First World War. Weech happened to know a man in his home village who was an officer on the same ship at the same time and he arranged a meeting between the two – on the proviso that the officer would promise not to mention the encounter to anyone else afterwards.

> The meeting duly took place and within the first few minutes it became obvious that there could no longer be any doubt. They spent nearly five hours discussing old times and past events. The clincher came when our host produced a collection of photographs. One was of a gun crew standing in front of a gun turret, and there, smiling at the camera, with the same telltale scar on the point of the chin, and looking only a little younger, was the Cult member.

As a result of his investigations, Weech came

to the conclusion that initiates of the cult did have the power to arrest the ageing process, along with 'the ability to alter or change certain physical characteristics and develop mental powers to a very high degree, and one other power, which I have promised not to disclose'.

This secret power would appear to be some manner of ensuring that each member remains absolutely submissive to the cult and does not disclose its existence or secrets to anyone. According to Weech, the Cult of Ayana does not charge for membership, nor does it accept voluntary donations. Moreover, it does not actively seek new members and will not pander to the curious.

Would-be members have their life thoroughly checked before being admitted and, if any of the details they have given turn out to be false, they are rejected. Those who are admitted are put in touch with a mentor, who remains their only contact with the cult until the preparatory period is over. At this point, the candidate is then given the choice of joining – for life – or withdrawing.

The Elders of the sect have complete control and any member who offends an Elder is subjected to severe penalties, including corporal punishment.

Weech states in his monograph that none of the members with whom he came in contact had any regrets. A young married man told him:

> We have literally to grovel sometimes. Our particular Elder has total power over us and can use us as he wishes, we can only obey. If he desires my wife, then he takes her and I have no say in the matter. Some of the ceremonies strip away all human dignity and yet we have no regrets. The diminishing of one's ego is a small price to pay for the priceless powers we now command.

In an attempt to investigate the cult further, the author contacted Magdalene Graham, editor of the quarterly *Occult World*, which originally published Weech's pamphlet. She said: 'Unfortunately, the Cult of Priapus and Ayana has now gone deep underground and severed all links with other organisations.' Asked if she believed the cult used Tantric methods to attain their age-retarding process, she replied: 'I should think it extremely unlikely that the Cult used Eastern methods as they . . . were extremely scathing of Eastern mysticism. They did state that they used sexual magic but, from the deliberate vague hints, it is obvious that this took somewhat unusual forms and probably consisted of acts which even in these "enlightened" times remain illegal.'

At one period, an occult group known as the Society of the Third Eye began to prepare a correspondence course, including a 'lesson' on the Cult of Ayana, but the sect subsequently asked that it be withdrawn. Magdalene Graham, who was involved in this project, reported: 'My personal contact with the real thing was of course via the Society of the Third Eye when we were preparing the lesson on P & A [Priapus and Ayana] for the Course, and I am sorry that I cannot give you any details of this, except to say that we required proof before attesting to their powers. . . .'

It is clear that there are cults in Britain, Europe and the USA today that practise sex magic that, they claim, endows their initiates with occult powers. Even if they deny the Tantric source, it is almost certain that the ancient cult of Tantra, based upon the symbolic union of the god Shiva and his consort Shakti, provided the initial impulse for such practices and beliefs.

Priapus disarmed, a painting by Austin O. Spare. Priapus was the ancient god of fertility, usually depicted with an enormous and erect phallus, and Ayana – the three-breasted goddess – was his consort. Members of the secret cult of Priapus and Ayana, which emphasises sexual rites of a Tantric derivation, are said to be able to halt the ageing process by their magical practices

A virgin is prepared for a black mass, with the goat-horned figure of the 'priest', representing the Devil, in the background. It may be intended to conduct the ceremony over her naked body – or worse, to sacrifice her. Blood lust was a powerful means of profaning the Church's ritual – sexuality another

Sex, sin and sacrament

The sex drive has been exalted by some occultists, denounced by others. Sexuality has long been a part of magical practice

THERE HAS ALWAYS BEEN a curious ambivalence in occult attitudes towards physical sexuality. Thus some occultists and psychics have looked upon any and every sexual feeling or activity as pertaining to mankind's 'lower nature'. According to this school of thought absolute chastity – purity in thought, word and deed – is an essential prerequisite for spiritual advancement. Typical of this viewpoint was the medieval compiler of *The sworn book of Honorius*, a textbook of ritual magic, who solemnly advised his readers to 'be penitent and truly confessed of all sins, forbearing all female enticements . . . for it is better to live with a bear or a lion in its den than live with a woman'.

Other occultists and mystics have adopted a diametrically opposite point of view, regarding sexual activity as an authentic sacrament: 'the outward and visible sign of an inward and spiritual grace'. Such a sacramental use of sexual intercourse can supposedly be employed as a means of acquiring occult power and, at its highest, lead to the ultimate goal of the mystic: union with the divine.

Among the mystics who have believed this are the 16th-century writers Cornelius Agrippa and Aratus. The former described copulation as 'full of magical endowment', while Aratus claimed that:

> As the physical union of man and woman leads to the fruit from the composition of each, in the same way the interior and secret association of man and woman is the copulation of the male and female soul, and is appointed for the production of fitting fruit of the divine life.

Sexual symbolism was in common use among alchemists as we will see, and some of them interpreted such symbolic phrases as 'the marriage of the Red King and the White Queen' not only chemically but also sexually. Some went so far as to attempt to manufacture the Philosopher's Stone – the mysterious substance that would transmute base metal into gold – from human semen. Thus 18th-century German records, quoted by Christopher McIntosh in his historical study of Rosicrucian societies, tell of an alchemical group that engaged in experiments of this sort. The leader of the group, an officer of high rank in the Austrian army, collected the raw material for this curious research by paying soldiers to masturbate.

The experiment ended in disaster. The soldiers under the officer's command were so enthusiastic to supplement their meagre pay that they neglected their military duties in order to engage in almost incessant masturbation. Eventually the regimental surgeon became aware of what was going on; the alchemical officer was reported to his commanding general and dismissed from the service. And to add insult to injury, the alchemists failed in all their attempts at transmutation.

Neither a ludicrous episode such as this nor the occasional confidence trickster who uses mysticism and the occult as an excuse to engage in sexual fun and games should be taken as an indication that all who believe sex

Above: the potency of sex is the theme of *Satana*, engraved in 1896 by the artist Fidus, who worked in Berlin. The woman is alluring, yet strangely menacing – the man seems to be in torment. His pose, reminiscent of the crucifixion, and the title of the work make an explicit link with magical sexual ritual

to be capable of leading to authentic religious experience are mad or perverted.

In the Western world there has always been a complex inter-relationship between religion and magic on the one hand and human sexuality on the other. Almost all mystical symbol systems, from astrology to the Tarot, have been given sexual interpretations. Even the Bible has been subjected to the same treatment by some commentators. French magician Eliphas Levi believed that the fall of Man, as described in Genesis, was sexual in nature: the 'original sin', which laid a perpetual curse on humanity, was Adam and Eve's first coupling. Russian mystic Madame Blavatsky, founder of the Theosophical Society, went even further: according to her the first five books of the Bible are 'the symbolical narrative of the sexes, and an apotheosis of phallicism'. By 'phallicism' she meant the worship of the male sexual organ as a manifestation of the divine.

Things not to be mentioned

Unlikely as Madame Blavatsky's assertion may seem, there may be a modicum of truth in it. Some students of the Talmud, the lengthy compilation of ancient Jewish commentaries, would agree. According to them, the 'Ark of the Covenant', the holy chest made of acacia wood that the Israelites carried during their long wanderings and eventually placed in the Temple in Jerusalem, contained a sacred stone carved in the shape of the conjoined male and female sexual organs. There would be nothing particularly surprising in this, for similar objects have been venerated by many cults. The ancient Greek 'mysteries', or initiation rituals, carried out at Eleusis, for instance, involved a rite called 'carrying things not to be mentioned'. The unmentionable things in question seem to have been a stone model of an erect penis and a hollow stone symbolising the womb of the goddess Demeter, who ruled over agriculture and fertility.

Some occultists believe that a mysterious psychic energy produces all the phenomena of the seance room, from table turning to spirit materialisation, and is at root identical with the energies that find their outlet in sex. It is the 'orgone' (orgasmic energy) of Wilhelm Reich, the 'Od' of the 19th-century mesmerists, and the 'astral light' of Paracelsus and other magicians. Those who hold this theory point out that poltergeist activity is usually associated with a disturbed adolescent who is unable to 'earth' his or her sexual energies with a partner of the opposite sex. The occult writer Benjamin Walker has gone so far as to claim that:

> Psychic researchers have repeatedly established that the centre of poltergeist activity is often a persistent masturbator, and they believe it possible that the biomagnetic energy drawn by the 'poltergeist' is obtained during the release of sexual tension, when the masturbator reaches his or her climax. Excessive masturbation . . . has also been cited as the reason for other unexplained psychic occurrences. . . .

Whether or not 'excessive masturbation' can be productive of psychic happenings there

Right: the marriage of the Red King and the White Queen, from *Splendor solis*, a 16th-century manuscript by Salomon Trismosin. It represents, conventionally, the combination of sulphur (male) and mercury (female). The prince that will be born of this union is the Philosopher's Stone, which can transmute base metals into gold. Some alchemists interpreted such symbolism more literally and regarded sexual activity as necessary to the making of the Stone

Left, the Fall, from the Flemish *Book of hours*, of about 1500. Many occultists have interpreted the eating of the fruit of the Tree of Life as Adam and Eve's first sexual coupling. In this picture sexual shame has already overcome the pair. Their punishment is shown at the bottom of the picture: Adam shall live by the sweat of his brow, Eve shall bear children in pain, and both shall return to the ground from which they were taken

seems little doubt that at least *some* outbreaks of poltergeist activity are triggered by sexual mishaps or unhappy and complex emotional involvements. Take, for example, the so-called 'great Amherst mystery' – the poltergeist haunting that astonished the inhabitants of Nova Scotia, Canada, in the autumn of 1878. It centred on 18-year-old Esther Cox. 'Esther Cox you are mine to kill', said writing that mysteriously appeared on the wall of the girl's bedroom. The haunting featured just about every type of poltergeist activity, from outbreaks of fire and stone-throwing to Esther's stomach swelling to enormous size. This last effect was presumably the result of swallowing air, or some internal fermentation, for she reverted to her normal shapeliness after 'a loud report, like a clap of thunder but without any characteristic rumble'. This must have been one of the noisiest poltergeist bangs ever, for Esther's mother leapt to the conclusion that her home had been struck by a meteorite and rushed to the bedroom of her youngest children to see if all was well with them. She found them sleeping peacefully and the house undamaged.

If, as seems likely, the poltergeist's 'thunderclap' was Esther breaking wind with immense vigour, one is forced to consider the possibility that the knocks, bangs and drummings associated with poltergeists sometimes have a similar origin. It is perhaps significant that the noises made by the 17th-century poltergeist known as 'the drummer of Tedworth' were on at least one occasion accompanied by a 'mysterious sulphurous smell', which 'those present found very offensive'. No such smells were reported by those who witnessed the Amherst hauntings; perhaps there were none, or, more likely, Victorian sensibilities prevented them from being mentioned.

These allegedly paranormal happenings were almost certainly triggered off by an experience undergone by Esther on 28 August 1878, exactly eight days before the supposed poltergeist first manifested itself. It involved Esther's boy friend, a certain Bob McNeal.

It is probable that for some time Bob had been making overt sexual advances to Esther, for on the night of 27 August she had a nightmare replete with Freudian symbolism, clearly expressing the girl's fear of male sexuality. In this dream all Esther's relatives had been magically transformed into huge bears with red eyes. When she opened the front door of her home she was horrified to see hundreds of black bulls, blood dripping from their muzzles, converging on the house. She slammed the door shut and bolted it, but the bulls continued their advance, butting their huge horns against the house. The building shook under the concerted assault – and then Esther awoke.

On the evening of the day following this ominous dream Bob McNeal took Esther for a drive in a two-seater buggy, which he had borrowed or hired. They drove together into

Eleusis, near Athens, was a holy site from the earliest times. The phallic figurine (above left) dates from before 2000 BC. The plaque (left) dates from the fourth century BC and depicts the 'mysteries' – the rites of initiation into the cult of Demeter, goddess of agriculture, and Persephone, her daughter. In the centre is an *omphalos*, a rounded rock representing the navel of the world; below it are ritual objects strongly suggestive of male and female sex organs

the surrounding wooded countryside. Bob reined in the horse and began to make amorous advances to Esther, urging her to walk into the woods with him. When she consistently refused – it would seem that she was prepared to indulge in a little light petting in the buggy but nothing more – McNeal lost his temper. He pulled out a pistol, pointed it at the girl's head, and ordered her to accompany him into the woods. She still refused and for a moment it seemed that McNeal would shoot her dead. Fortunately, however, another vehicle approached, the alarmed McNeal pocketed his pistol, snatched up the horse's reins, and drove Esther to her home. That night he left Amherst, presumably in fear of being charged with attempted rape, and was never heard of again.

Right: Hereward Carrington, psychical researcher, traced and interviewed Esther Cox, a famous poltergeist victim, who many years before had been plagued by poltergeist disturbances at her home (below right) in Amherst, Nova Scotia. The house was almost wrecked by some of the outbreaks. Carrington found that the phenomena had not recurred since Esther's marriage – possibly due to the release of her sexual energies

In a sense, however, he remained with Esther for many years. The sexual cravings and fears that McNeal had aroused seem to have built up in Esther a pressure of psychic energy – a sort of impending libidinal thunderstorm – which, failing to find an outlet in the ecstasy of orgasm, powered the 'spontaneous combustions', 'levitations' and other psychic wonders that astonished the citizens of Amherst.

Many years later Hereward Carrington, the psychical investigator, traced and interviewed Esther, by then married and living in the United States. She was reluctant to talk about the past, but made a most significant admission. From the day of her wedding, she said, 'the power' had left her; she was again a stranger to the 'paranormal'.

Some of those occultists and psychical researchers who assert that the 'subtle forces' of the seance room and the sexual currents of the libido are manifestations of one mysterious energy believe that it can be transferred from one person to another. In this way, so it is suggested, the old can, accidentally or by design, draw in the life force from a younger person for their own benefit.

The use of this curious psychic technique has a long history. It is often called 'Shunamitism', from an incident recorded in the Old Testament:

> Now King David was old and stricken in years . . . he gat no heat. Wherefore his servants said unto him, Let there be sought for my lord the king a young virgin . . . and let her lie in thy bosom, that my lord the king may get heat. So they sought for a fair damsel throughout all the coasts of Israel, and found Abishag a Shunammite, and brought her to the king. And the damsel was very fair and cherished the king, and ministered to him. . . .

Abishag regularly slept with David but did not have sexual intercourse with him, for this would have 'earthed' the life force and frustrated their intention.

The same technique was used in classical Greece and Rome, seemingly with considerable success. Latin historians record, for example, the remarkable case of a certain L. Claudius Hermippus who, when he reached the age of 70, began to feel a waning of his physical and mental powers. He immediately began to sleep with young virgins, though, like King David, without sexual activity. His tombstone recorded that he lived to the age of 115, owing to 'the emanations of young maidens, causing great wonder to all physicians'.

Many European rulers of the Middle Ages

Barbarossa (Frederick I of Germany) revived his failing energies by bodily contact with young boys. The cure may have been surprisingly successful: legend has it that he did not die but merely sleeps (above). King David's tonic (right) was the embrace of Abishag

practised Shunamitism, sometimes in a homosexual variant. Thus the Emperor Barbarossa held young boys against his stomach and genitals in order to 'savour and absorb their energy'; Pope Innocent VIII, the immediate predecessor of the Borgia pope, Alexander VI, employed healthy young children to stroke him and thus transfer their energy to him.

Some physicians of the time held that this life energy was strongly concentrated in youthful blood, and Ficino, a Platonic philosopher who also practised medicine, suggested that vampirism should be employed by those enfeebled by age. The old, he said, should drink fresh blood drawn from youthful veins 'after the manner of leeches'.

Shunamitism survived into the 18th century and, in both Paris and London, was practised on a commercial basis. For example, 'Madame Janus' of Paris owned a successful establishment that at one time was reputed to give employment to over 40 virgins. A client's course of treatment lasted for three weeks. Each night he was given a 'magical bath' containing herbs, then massaged with aromatic oils, and finally tucked into bed between two virgins, one blonde and one brunette. The treatment was, of course, expensive and had to be paid for in advance. In addition Madame Janus insisted that each client deposit a substantial sum of money with her. This was to be forfeited by any man who was so rejuvenated that he deflowered one of his sleeping partners.

A similar establishment, the 'temple of Aurora', was conducted in London by Mrs Anna Fawkland, whose clients were reputed to include elderly aristocrats such as Lords Buckingham and Cornwallis.

A belief in the efficacy of this almost vampire-like technique for acquiring psychosexual energy was among the strangely assorted articles of faith of Heinrich Himmler, sinister chief of the Nazi SS. Himmler, as well as carrying out his unpleasant duties with dry efficiency, spent much time thinking about such unlikely problems as the mystic symbolism of Gothic architecture and 'the occult significance of the Etonian top hat'. In 1940 he became concerned about the number of Luftwaffe pilots who died from exposure after parachuting into the North Sea. He decided that if such pilots were picked up while still alive they would probably recover if they were placed between the bodies of naked girls. To test this hypothesis SS physicians carried out a series of experiments in which concentration camp inmates were placed in tanks of freezing water until they became unconscious and were then put to bed between naked girls.

The efforts of the women revived several victims to a point at which they achieved coitus. But this depraved parody of Shunamitism did not lead to a higher recovery rate overall than did orthodox methods of warming the experimental subjects.

Sex, sorcery and seances

Many Victorians seem to have regarded supposedly psychic activities as a cloak for scandalous improprieties. But some occultists insisted there was a more profound link between sex and psi

Seances were a craze in the late 19th century, but the trickery employed by so many mediums brought them into general disrepute. A 'materialisation' that may have been convincing in half-light (below) is here shown up as a ludicrous fake by the cold light of the camera flash. It was widely believed that the obligatory darkness of the seance also covered other kinds of impropriety – and the humorous cartoon of 1896 (left) exploits the idea

THE HIGH WATER MARK of interest in Spiritualism was the period 1850 to 1890. Throughout these 40 years claims of remarkable phenomena at seances, from full spirit materialisations to the levitation of mediums, were commonplace. Once, however, the Society for Psychical Research (SPR) and other scientific investigators began to impose realistic test conditions on the mediums such marvels first diminished and then almost ceased. At the present day spirit materialisation is very rarely claimed to occur and, so it seems, it *never* takes place in the presence of non-believers and under rigid test conditions.

There is strong reason to believe that every professional Victorian medium, with the possible exception of D.D. Home, practised fraud at one time or another. Even those who may have possessed genuine paranormal powers were not averse to practising deception when 'the power was weak' or 'the guide

The celebrated medium Florence Cook (above) carried on a bitter feud with her rival, Mrs Guppy. Her most famous 'spirit guide' was Katie King, supposedly the daughter of the pirate Henry Morgan. When Katie appeared at Florence's seances (above right), she bore a strong resemblance to Florence. But the hated Mrs Guppy proved equally capable of materialising Katie: here (right) the spirit stands over Mrs Guppy and the medium's son Tommy. Such psychic rivalry led to Mrs Guppy's underhand attempts to sabotage Florence Cook's seances. In return she was accused of running a 'house of assignation'

could not be reached'. It is not surprising that men and women who were prepared to produce fake spirit phenomena in order to extract money from the pockets of the bereaved were also prepared discreetly to defy Victorian morality. Some women mediums became notorious for this, and even Spiritualist newspapers made veiled references to 'moral degeneration' as an occupational disease of mediumship, usually attributing it to obsession by evil spirits. A more likely explanation is that some mediums simply did not care about society's sexual mores.

Allowance must also be made for the normally sternly repressed sexual emotions, fantasies and memories, which were likely to erupt when any respectable Victorian entered a trance. In 1888 one anonymous member of the SPR reported that he or she had seen

> a medium, at others times calm and respectable, suddenly under some mysterious influence or control, break out into a tirade of the most horrible blasphemous and obscene language, which drove all the sitters from the table, to which no persuasion would ever afterwards persuade them to return.

Curiously enough the writer of the above report fell victim to the same kind of phenomenon when experimenting with automatic writing: 'At last . . . the pencil settled down to steady writing, and there came the most filthy, vile language such as the mind could never have imagined.'

A cloak for prostitution

Spiritualism seems sometimes to have served as a cloak for prostitution and similar activities. A feud between two mediums, Florence Cook and Mrs Guppy, drew some curious allegations concerning the latter. Mrs Guppy was a 'powerful physical medium' whose accomplishments had included the materialisation of fresh flowers and a large block of ice at a seance. In January 1873 she found that her clients were being drawn away by what she referred to as the 'doll face' of Florence Cook, who was young and attractive. It is of interest that Mrs Guppy should consider Florence's appearance, rather than her psychic abilities, to be the reason for her increasing popularity.

Mrs Guppy decided to take drastic measures. In the guise of enquirers a certain James Clark and two other friends of Mrs Guppy were to attend a Florence Cook materialisation seance. When a 'spirit' – whom they expected to be Florence Cook in disguise – manifested itself, they were to throw oil of vitriol (concentrated sulphuric acid) in its face.

Mrs Guppy tried to enlist the help of two American mediums, Mr and Mrs Holmes, in her scheme, but they indignantly refused and sent a warning to the intended victim. In revenge Mrs Guppy regularly sent roughs to break up the Holmeses' seances. Such activity ceased only when, in a letter to the London Dialectical Society, Holmes threatened to expose her:

> If necessary, I can give you the details of the infamous transactions of Mrs Guppy with Miss Emily Berry, 1 Hyde Park Place, also why Mrs Guppy used her pretended mediumship for base purposes, and gave seances solely for assignation to better enable certain disreputable parties to further carry out their lewd propensities.

The meaning of the first part of this sentence

is obscure; the second is explicit enough.

In the 19th century 'black' magicians were usually those occultists who employed sex to unlock the gates that lead to the paranormal. There were a surprising number of these. Of course, they took care to avoid adverse publicity and tended to speak and write of their activities in coyly symbolic language. One such was P.B. Randolph, an American occultist who called himself a Rosicrucian. He believed that in the course of human copulation both men and women produce 'psychic secretions' as well as the more familiar male semen and female lubricants. These positive and negative psychic secretions, said Randolph, are 'thesis and antithesis' and combine into a 'new and higher unity' that sets in flow a current of psychic force. If certain secret techniques are used for directing this current into the proper channels both participants in the sexual act will receive physical, mental and spiritual benefits.

In typically vague and flowery language Randolph described how he had acquired this knowledge:

> I made love to, and was loved by, a dusky maiden . . . I . . . learned the fundamental principle of the White Magic of Love; subsequently I became acquainted with some dervishes . . . and of these devout practices of a simple but sublime and holy magic . . . I obtained . . . the ELIXIR OF LIFE . . . the water of beauty and perpetual youth, and the philosopher's stone.

Another 19th-century practitioner of sexual occultism was Thomas Lake Harris, English by birth but American by naturalisation. His method involved something he called 'archnatural respiration' – probably nothing more than deliberate hyperventilation of the lungs. But he also dabbled in an occult sexual technique that involved a couple breathing in unison while they copulated.

An erotic astral link

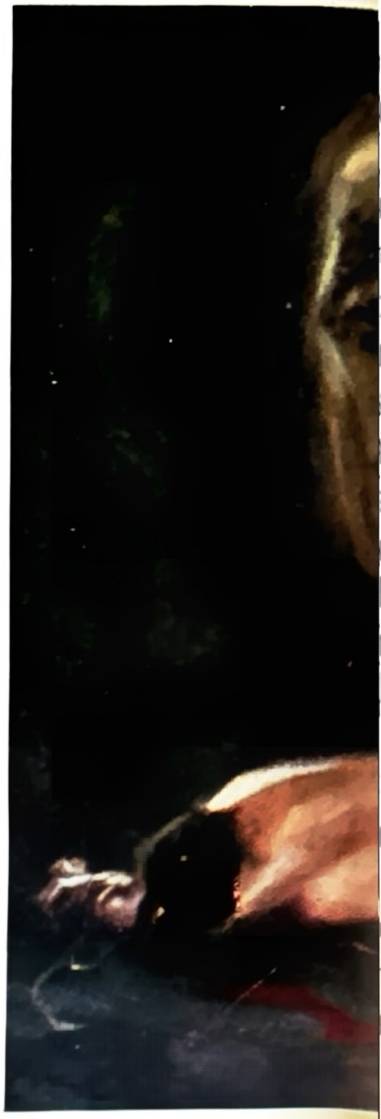
An adaptation of this so-called sympneumata has been employed by black magicians of the present century for purposes of seduction. The would-be lover sits as near as possible to his intended victim. He gauges her breathing by the rise and fall of her breast and, once he has established the exact rhythm, begins to breathe in precise unison with her. The sorcerer continues this for a period of between three and five minutes and then contracts the muscles of his anus for five to ten seconds. This, supposedly, establishes an 'astral link' between the two people involved, by bringing into action the man's *muladhara chakra*, a centre of psychic activity that, according to some occultists, controls the libido. It is situated, they claim, in a part of the 'subtle body' roughly corresponding to the area between the anus and the genitals.

The magician then gradually increases his rate of breathing until it reaches the rate characteristic of the height of sexual activity. The 'astral link' ensures that the emotions normally associated with this rapid breathing are communicated to the woman, and she immediately experiences sexual arousal. The magician then begins a conversation. . . .

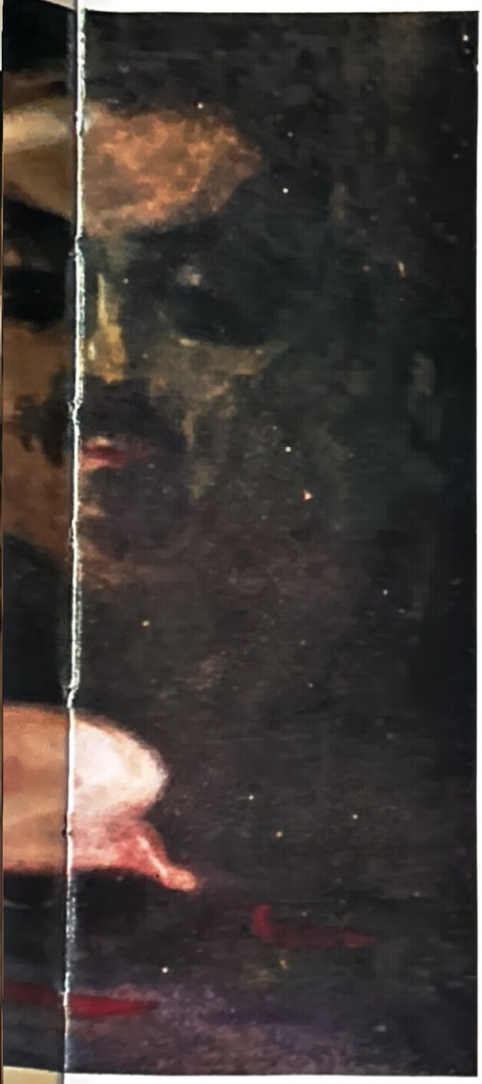
Those who practise sympneumata attempt to establish 'astral links' with their victims for more than mere sexual satisfaction. Once the established link has been sufficiently strengthened the bedmate can be transformed into a disciple, and thus, it is averred, one more black magician comes into existence.

All this is very reminiscent of an ancient idea about vampirism: that its victims themselves become vampires, seeking out the living for nourishment.

Many occultists have been well aware of



'The Master Saturnus' was the title taken by one Gregor A. Gregorius (above), who in the 1950s revived Saturn-Gnosis, a German occult society suppressed by the Nazis. The society taught a system of sex magic in which the posture used in sexual intercourse was dictated by the positions of the Sun, Moon and planets. Gregorius's sexual interests were also reflected in his writings – such as the novel *Exorial* (right), 'the romance of a demonic being'



Above: the erotic element in the conventional vampire tale is made explicit in this painting – which comes from, of all things, a Viennese postcard of 1900. Some forms of sex magic are akin to vampirism, the victim becoming a disciple of the magician

such similarities and have theorised elaborately on the subject of 'psychic vampirism' – draining psychosexual energy from the victim. This can be done in several ways: some vampires are supposed to be sufficiently powerful to absorb energy simply by sitting in the same room as the objects of attack, while others have to engage in 'astral projection' and, in ghostly form, visit their victims as they sleep. Still others can extract the desired energy from a partner only in sexual activity. Really expert vampires, one group asserts, can sexually exhaust their victims to the point of death. In this way the vampire not only obtains the physical strength of the victim but acquires his or her soul as a familiar spirit.

The Master Saturnus

An offshoot of the group that produced this absurd 'occult teaching' was 'Saturn-Gnosis', active in Germany from the 1920s until its suppression by the Nazis. It was revived again about 1950 by a man who called himself 'the Master Saturnus'.

The leaders of Saturn-Gnosis taught an extraordinarily complex system of sex magic, either based on their own imagination and fancy or some secret tradition. The system is so involved that it seems hardly worth the trouble of following it, however beneficial the supposed results. For example, before engaging in sexual activity, initiates of the group were instructed to consult ephemerides (tables giving the daily positions of the Sun, Moon and planets in relation to the zodiac). If Venus and Mars were square – at an angle of 90° to one another as seen from the Earth – copulation should be carried out in a sitting position. The exact nature of the sitting position would have to be decided in accordance with astrological conditions: thus if Venus were in a 'stronger' zodiacal position than Mars, the woman would sit on the man's lap. When the couple eventually decided on their appropriate posture they were not to start their activities before burning protective incense and placing defensive occult symbols around themselves.

The type of sex magic associated with Saturn-Gnosis and similar European groups spread across the Atlantic in the 1920s and has continued to flourish ever since. For example, the Great Brotherhood of God was led by a one-time resident of Aleister Crowley's 'Abbey of Thelema'. It was extremely active in the 1930s and attracted a surprisingly large membership. Louis Culling published a detailed account of his progress in this society. He had to pass numerous tests, in one of which he was required to engage in continuous sexual intercourse, without ejaculation, for a period of three hours. Culling not only passed all his tests, rising to high office in the brotherhood, but carried out much research in the field of occult sexuality. His major triumph was his discovery that *damiana*, a Mexican herb traditionally reputed to possess stimulant qualities, was a 'psychic aphrodisiac'. Those taking it, he claimed, benefited not only physically, by becoming more potent, but also astrally: they became so filled with psychosexual energy that they were irresistible to members of the opposite sex.

If Culling's published account is to be believed, a series of experiments he carried out in 1962 proved the paranormal effects of *damiana* beyond all reasonable doubt. The 69-year-old researcher began to drink a daily cupful of an infusion of the wondrous herb. After only 10 days women over 30 years younger than himself 'began to take an interest in him'. Four days later, his libido bursting with the energy of a man half a century younger, he left his Los Angeles home for a short holiday in the Mexican border town of Tijuana, famed for its bars and honky-tonks.

With no trouble at all he got into conversation with a young waitress, who agreed to visit him at his hotel. Fortified by *damiana* the couple engaged in extended and ecstatic copulation. The waitress was so delighted by her experience that she 'had stars in her eyes'.

Such, then, are the claims of the sexual occultists. They range from the absurd to the plausible. They suggest a two-way traffic between the psychosexual energy of the libido and the outer world: the libido, it is said, can move matter, as in poltergeist phenomena; and it can itself be revitalised and manipulated by drugs, by rituals, or by feats of psychic exertion. Diverse as these beliefs are, they are alike in the stress they place on a 20th-century obsession: the central importance of sex.

Right: Louis Culling gained high office in a brotherhood of sex magicians

Possessed by the gods

In the magical Haitian spirit religion of voodoo, the ritualistic dancing by devotees to throbbing drumbeats and rhythmic chanting can climax in an ecstatic, trance-like state – in which the dancer believes he becomes a divine being

A SPECIAL INTEREST in traditional dance forms took American freelance film-maker Maya Deren to the republic of Haiti in 1947 on an assignment for *Life* magazine. It was her intention to record on film the ritual dances that are central to many voodoo ceremonies. She aimed to be a completely detached observer: her interest lay in the artistic element of the dances, not in the religion of voodoo itself.

Her detachment did not last long. So strong was the power of the rituals she witnessed that her role of observer was quickly abandoned, and she was swept up into active participation in the voodoo dancing and involuntarily entered a trance-like state on more than one occasion. She seemed to be possessed by the strange voodoo goddess Erzulie (the name is of African origin) who, according to voodoo believers, blends the sexual and emotional characteristics of the pagan love goddesses Venus and Aphrodite with the compassionate and gentle characteristics of the Virgin Mary.

This synthesis of elements drawn from widely different sources is typical of voodoo, in both its religious and magical aspects. It is the magical elements that have attracted most attention from outside observers. Few Europeans remain unaware of such aspects of voodoo as zombies, the macabre and terrifying walking dead and the rituals of black magic aimed at bringing about the illness or death of an enemy. Practices such as these, which often involve the use of blood, semen, poisonous herbs and the remains of human bodies, are without doubt part of the darker side of Haitian voodoo.

The late François Duvalier – 'Papa Doc' – Haiti's sinister dictator, had in an earlier and more innocent phase of his life written a serious anthropological and psychiatric study of voodoo: he was also reputed to use voodoo black magic against his opponents. Whether or not this was so, there is no doubt that black magic was used against him. On one occasion his father's skeleton was stolen from its grave by anti-Duvalier sorcerers; the bones of an enemy's father are considered by voodoo magicians to be a powerful ingredient in potions designed to destroy that enemy.

But the magical element is only one aspect of voodoo. As in other Afro-American spirit religions, the central core of voodoo is a deliberately induced trance, involving the cessation of normal consciousness and the apparent possession of the devotee by one of the *loa*, the gods and goddesses of the voodoo pantheon. This possession is not confined to the priests and priestesses who have undergone long periods of training and successive initiations into the inner mysteries. In most authentic voodoo ceremonies (as distinct from carefully stage-managed shows put on for the benefit of tourists) some of those taking part in the ritual dancing do at one time or another experience the state of trance and possession.

Some of those who are seemingly in trance may of course be simulating the state: there are well-authenticated reports of 'possessed' devotees suddenly reverting to normal behaviour when confronted by an emergency. But there are equally well-authenticated accounts of Haitian peasants being spontaneously possessed by a *loa* when faced with a sudden crisis: a normally timid man might be possessed by the Haitian war-god when confronted with a rabid dog. On the whole, most voodoo possession seems to be genuine in the sense that the possessed man or woman is in a state of trance.

Top and above: voodoo is a potent force in modern Haiti However, the ceremonies shown here in the capital, Port au Prince, may have been laid on merely for the benefit of tourists

Below right: voodoo drummers and singers help whip up emotions in ceremonial dancing. These three drummers, with a chorus in the background, were photographed at the time Maya Deren visited Haiti in the late 1940s

Bottom: voodoo originated in the spirit religions of Africa, which are still practised in various forms. Here an African voodoo priest casts out an evil spirit that has taken possession of a believer

In her book *Divine horsemen: the living gods of Haiti* (1953) Maya Deren gave a fascinating account of the sensations preceding her loss of consciousness and the 'seizure' of her mind and body by the goddess Erzulie. As she danced, she said, she felt a strange numbness creeping upwards through her legs, a feeling so extraordinary and unlike anything she had previously experienced that she called it 'a white darkness – its whiteness a glory and its darkness terror'. It flooded her body like a great force, threatening to burst her skin and explode her skull. Inwardly, she begged the force for mercy; in reply she heard a shrill, unearthly chorus of 'Erzulie' calling from within her own mind. Then she remembered no more until she 'came to' two or three hours later.

The *hungan* (voodoo priest) told her she had shown all the characteristics of being 'mounted by Erzulie' – the goddess had taken control of Maya Deren's actions in the way a skilled rider guides his horse. The analogy is misleading, however, for a horse retains its normal consciousness when being ridden, but devotees mounted by the Haitian *loa* enter a trance state in which they lose all consciousness of themselves and their surroundings.

Since the *hungan* assured Maya Deren that her behaviour during trance was typical of possession by Erzulie, and since the various *loa* always follow a predictable pattern of behaviour when they possess a devotee, it is fairly easy to deduce what Maya Deren did during her descent into 'the white darkness'. She would have begun by using the consecrated combs, soap, scent and other toilet articles that are kept in voodoo temples for the exclusive use of Erzulie. The grooming process completed, Erzulie (in the body of Maya Deren) would have decorated herself with the jewellery kept for her. This usually consists of a large selection of cheap, flashy costume jewellery; it always includes three wedding rings, as according to voodoo belief Erzulie has three husbands in addition to many lovers.

Queen for a day

Her toilet finished, Erzulie would have chosen from among the worshippers several handsome young men to act as her courtiers while she moved among the congregation, introducing herself to each member of it. She would shake hands with the men but extend only a finger to the women; Erzulie is not well-disposed towards members of her own sex, regarding them as sexual rivals.

Tired out by socialising, she would then either have demanded refreshments (iced cakes and sweet, fizzy alcoholic drinks are her particular favourites) or taken her ease in an armchair, basking in the admiration of her worshippers. In either case she would have behaved as though she was extremely happy, without a care in the world. Eventually, however, she would have begun to complain about something or other; the cakes were not sweet enough, perhaps, or her drink was insufficiently iced, or her chair was in an inconvenient position. Apologies from the worshippers would not have satisfied her; she would have asserted that nobody really loved her, and started to weep. Finally, in a storm of tears, she would have been led to a couch and fallen into a deep sleep – to awake as Maya Deren.

Maya Deren's experience of the trance state transformed her attitude towards voodoo. Instead of regarding it as a web of interesting superstitions, a bogus faith whose devotees performed choreographically appealing dances, she came to see it as an authentic religion, incorporating ethical values and a life style that she accepted as

being in many ways admirable. As she pointed out, voodoo (together with other religions in which spirit possession is a central feature) is qualitatively different from the great religions of Islam and Christianity. In these there is a sharp divide between creator and created: whereas the orthodox Christian claims to come close to the divine through the sacraments of the Church, and the Sufi mystic may believe he has enjoyed some contact with the divine, the voodoo devotee actually becomes a god or goddess and may also meet other divinities when they take possession of other worshippers.

The core of voodoo is a blend of African spirit religions brought to Haiti by slaves imported by the French plantation owners; the word voodoo is thought to be a corruption of *vodun*, which in the Fon language of West Africa means god, spirit, or 'sacred object'. However, over the two centuries or so during which voodoo has developed to its present form, the African core has been joined by other elements, notably popular Catholicism and degenerate European grimoire magic.

Above and left: these two pictures (taken six months apart and in different voodoo centres) show two separate devotees possessed by the same *loa*. Each exhibits the characteristic pose of the deity

Pictures of Catholic saints are found in most voodoo temples, where they are identified with individual voodoo gods and goddesses. The 'Virgin of the Sorrows', her heart pierced with swords, is identified with Erzulie; pictures of St Patrick, busily engaged in driving the snakes out of Ireland, are held to be portraits of Damballah, the serpent-god; while St John the Baptist is identified with Shango, a disagreeable African god of storm and thunder. This latter identification has probably arisen because due to special climatic conditions Haiti is often subject to violent storms in the days following the festival of St John the Baptist.

The Catholic Church in Haiti has fought a long, and largely unavailing, battle against voodoo, at times using the force of the civil power to conduct religious persecutions in which voodoo temples and magical implements have been destroyed. In spite of this the majority of the Haitian rural population remain convinced that there is a real connection between voodoo and Catholicism, and that the powers of voodoo and of Catholic priests in some way complement each other. As one voodoo believer told an anthropologist, 'The things of the Church are always affairs of magic.'

This belief has caused a lot of trouble for the Church in Haiti. The custodians of rural churches must be on constant guard against thefts of items such as holy water, consecrated candles and sacred images, since all these are believed by voodoo practitioners to be possessed of occult properties. Even the most sacred ceremonies and festivals of the Church have been made to serve as adjuncts to voodoo operations.

On one occasion, so it is reported, a bishop

Right: a voodoo priestess in ceremonial robes with the head of a billy goat enveloped in a red shirt. The billy goat is the traditional offering to Baron Samedi, master of black magic

of the Church was induced to hold a solemn funeral ceremony incorporating a requiem mass over a gilded coffin that he was led to believe was that of a dignitary from a remote part of the republic. As the ceremony proceeded an extraordinarily pungent odour, which was neither that of sanctity nor even that usually associated with decomposition, started to emanate from the coffin. The suspicious bishop suspended his officiations and demanded that the coffin should be opened. The mourners demurred and, when the bishop persisted, took to their heels: inside the coffin there proved to be a drugged, but very much alive, billy goat.

Voodoo believers attend many Church festivals, where they worship their own gods under a guise of devout Christianity. At the 'Festival of the Palms' – a Haitian Catholic festival held each July – the anthropologist Melville Herskovits reported that he witnessed 'Catholic pilgrims' being possessed by Erzulie, the serpent-god Damballah and even the sinister Baron Samedi, the lord of cemeteries and master of black magic. It is remarkable that worshippers of Baron Samedi should have taken part in a Catholic pilgrimage, for the Baron and his assistant Guédé are closely associated with the voodoo 'cult of the dead', to which the Church is particularly hostile on account of its resemblance to European necromancy.

In Haitian festivals Christian and voodoo elements are inextricably interwoven. The Christian voodoo devotee baptises both his children and his drums, worships deities that are in part Catholic saints, and makes frequent use of the sign of the cross

The cult of the dead is practised by only a minority of voodoo believers, and those who take part in its rites are sometimes held in awe tinged with fear by their neighbours. The most public manifestation of the cult takes place on All Souls' Day, when Baron Samedi's disciples, dressed in purple and black (the colours of mourning) flock to rural cemeteries and dance in honour of the Baron and his kingdom of death. This dance blends Eros and Thanatos (love and death) in a way that delights some Freudians. The dancers roll their eyes upwards like corpses, sing (in voices intended to imitate a death rattle) ballads of the utmost sexual grossness, and dance the *banda*, an imitation of human copulation that involves the dancers holding sticks in positions suggestive of erect male sexual organs.

Entities of death

This festival has two main functions. First, it provides the participants with an orgiastic relief from the grinding poverty and physical hardships of their everyday lives. Second, it provides them with the assurance that they are on good terms with the evil and dangerous entities associated with death.

There are many such evil creatures in Haitian folklore. The most notable, apart from the zombie, are the *loup-garou* and the *baka*. The *loup-garou* is a kind of vampire. It is female, usually red-haired, and has bloodshot eyes. During the day it appears to be an ordinary peasant woman: at night it slowly drains the life from its neighbours by sucking their blood. Unlike the European vampire, which is reputed to go for the throat, the *loup-garou* makes its incisions between its victims' toes. The *baka* are evil gods, or the spirits of black magicians, who transform themselves into animals and roam nocturnally in search of victims whom they devour.

One of the attractions of the voodoo religion is that its ceremonies are designed to protect the participants against evils such as these. But this is by no means its only appeal. Voodoo and other spirit religions, such as Candomblé in Brazil, number millions among their adherents, and it seems clear from their popularity that their common feature – the spiritual experience of being possessed by the gods while in a state of trance – satisfies some deep-rooted need of the human psyche.

Drumming up the spirits

Although Catholicism is nominally the prevailing religion of Brazil, the sophisticated, Westernised life-style of the people is interwoven with pagan and magical elements of ancient spirit religions

A massive statue of Christ (left) towers over Rio de Janeiro, a reminder that Brazil's official religion is Catholicism. Yet many of the country's inhabitants also adhere to the beliefs of Macumba, the Brazilian form of voodoo. Rio's Copacabana beach (below) is both a pleasure resort and the scene of many Macumba rites, such as the one shown here in honour of the African sea goddess Yemanja

BRAZIL HAS A POPULATION of around 95 million and is often described as the world's largest Catholic country. Nominally this is true: almost every child born in the country is baptised, and most Brazilians receive the last rites of the Church when they are mortally ill and, after death, a full Catholic funeral. But while the Catholic churches and cathedrals are often crowded, the voodoo temples of Candomblé, Umbanda and other Afro-American spirit religions (which in Brazil are collectively referred to as Macumba) are more crowded still.

The practice of Macumba rituals is widespread throughout the country and does not take place only inside temples. Macumba ceremonies can be, and are, performed in isolated clearings in the the Amazonian jungle, at crossroads (traditionally, as in Europe, popular places for magic rites), and even on Rio de Janeiro's famous Copacabana beach, which is one of the world's most popular pleasure spots.

This dual role of Copacabana beach aptly illustrates the powerful hold Afro-American religion and magic have on Brazilian life. By day the beach is packed with sunbathing tourists; by night it is thronged with Macumbistas worshipping a host of exotic gods and demons, and casting spells designed to obtain love, money or power, or even the death of an enemy.

On New Year's Eve Copacabana is the site of a major Macumba festival combining secular, religious and magical elements, at

which the gods of pagan Africa are worshipped, together with the Catholic saints with whom they are identified. The principal object of adoration however is the African sea goddess Yemanja, who is often identified with the Virgin Mary.

Yemanja was brought to Brazil by Yoruba slaves from the area of Africa that is now Nigeria. In Yoruba mythology Yemanja was the daughter of heaven and earth. She married her brother, and then coupled with her son, who fathered on her a whole tribe of gods and goddesses, among them Shango, the god of storm and thunder (identified by Macumbistas with St John the Baptist), Ogun, the god of war and ironworking, and Orishako, a peasant god who rules over agriculture and female fertility. The name Yemanja is derived from the Yoruba words for 'mother' and 'fish'; she is the 'mother of all fish' and therefore queen of the ocean and everything under and upon it. For this reason her chief festival is held on the seashore, and the offerings dedicated to her are given to the sea.

As sunset approaches on 31 December Macumbistas make their way individually or in small groups to Copacabana beach. Some come on foot, some in cars (many of Macumba's devotees belong to the prosperous middle classes). And since the New Year's Eve festival is of national significance many more come in motor coaches from temples hundreds of miles away.

The worshippers are mostly dressed in white – Yemanja's favourite colour – and they carry candles and gifts to be offered to the goddess. Each devotee places lighted candles in a previously dug hole carefully walled with sand as a protection against the wind. The offerings, which may be mirrors, bottles of scent, hair ribbons or, in the case of prosperous businessmen, expensive bottles of imported Bourbon, are placed near by.

Top: at night on Copacabana beach a priestess dedicates flowers, clothing and other items to Yemanja before consigning them to the waves

Above: David St Clair, who was the victim of 'closing the paths', a technique of Quimbanda black magic

Left: at the *Saida dos Santos* ceremony, which celebrates the 'leaving of the saints', a dancer in rich ceremonial robes represents the voodoo deity Oxum

Each devotee then looks fixedly into the flames of the flickering candles and asks Yemanja for some favour. The more candles there are, the better; it seems that either Yemanja likes the smell of burning wax, or she wants her worshippers to spend as much money as possible to show their devotion. Whether the number of candles offered is odd or even is important. If the devotee wants some material benefit, such as a wage increase or a new car, he must burn an even number of candles; for something to do with the emotions, such as a love affair or a better relationship with one's neighbours, the number must be odd. If the candles burn to extinction or are swept out to sea by the incoming tide, it is a sign the wish will be granted. If however they are blown out by the wind, the omen is unfavourable.

As the myriads of candles are lit the Macumba drums start to sound, and the dancing begins. At first only a few people dance, rather mechanically, as if performing a necessary but boring duty. As the evening wears on the numbers increase, and a frenzied, almost orgiastic, quality becomes apparent. Eventually, as in the voodoo celebrations of Haiti, some of the dancers enter a trance state and become possessed – the gods descend and 'mount their horses'.

As in Haiti those who are possessed seem to lose all consciousness of their own identity, and when they return to normal consciousness cannot remember what happened during the trance state. Out of the great number of dancers on the beach only a few will achieve the trance state; nevertheless it is possible for the interested onlooker to move through the crowds and meet many members of the Macumba pantheon, such as the god of war, the god of thunder, 'the Old Black Slave' (a supernatural being renowned for

his powers of healing) or Exu, a sinister entity who is the nearest Macumba equivalent to Satan.

In due time the tide sweeps away Yemanja's gifts, the entranced dancers return to normal consciousness, the worshippers make their way homewards and the festival is over for another year.

The New Year's Eve festival at Copacabana is no mere anachronistic survival from a past age of slavery and superstition. Belief in the existence of the spirit world is alive and well at every level of Brazilian society. Peasants, factory hands, bankers and politicians almost all believe in gods, demons and supernatural powers, even if they are not prepared to admit it to sceptical foreigners. This widespread acceptance of the supernatural would seem to extend even to such a prosaic institution as the Brazilian Post Office. In 1957 and 1964 it issued pictorial stamps in honour of *The spirits' book* and *The gospel according to Spiritism*, both works by Allan Kardec, the founding father and first theoretician of Spiritism.

Kardec's Spiritism differs from Spiritualism in that it incorporates a belief in reincarnation. Its influence on Macumba varies from group to group. Some temples conduct ceremonies that are almost completely 'Kardecised'. When the devotees are in a state of trance they follow a Europeanised pattern of behaviour and their actions are quite as restrained and unalarming as those of any French or English Spiritualist medium. In other temples less influenced by Kardec, those possessed by the gods engage in remarkable and spectacular activities that are seen by the onlookers as evidence of genuine control by otherworldly beings. Such activities include walking on broken bottles, inserting large needles into the cheeks, fire eating, and drinking whole bottles of raw cane spirit within the space of a few minutes, all apparently without any untoward effect.

Above: Brazilian Macumba ceremonies are folk rituals in which all present participate to some degree; here, at the climax of a festival, the dancers prostrate themselves

Below: a young girl dances in a trance to rhythmic hand-clapping and the music of simple instruments

Manifestations of this kind are not as uncontrolled as they may appear. Macumba ceremonies follow a pattern that is quite as predictable, in terms of its own conventions, as any Christian service. Stylised drum rhythms, dancing, a charged atmosphere of religious expectation, and the practice of deliberate over-breathing (which produces changes in brain chemistry) induce a near-hypnotic state in all the participants. When the high priestess calls the gods down the dancers stop moving one by one. Some bend down, and then straighten up, often with a scream, in a trance, possessed by a divinity.

'Closing the paths'

As in Haiti, so in Brazil there is a darker side to spirit religion. This is Quimbanda, an evil voodoo whose practitioners work black magic against their own and, for a fee, their clients' enemies. A favourite technique of Quimbanda is 'closing the paths'. This involves casting a spell that blocks the victim's progress to personal happiness. The person who has been subjected to this finds that love and financial matters cause nothing but trouble, that their physical and mental health deteriorate, and that problems arise in even the most ordinary everyday affairs.

The American writer David St Clair seems to have been the victim of such a psychic attack during the time he lived in Brazil. His girlfriend left him, money he was expecting did not arrive, legal difficulties arose over an inheritance, and he contracted malaria. He attributed his misfortune to

Right: votive offerings to a deity to effect a cure. The image itself (such as the feet and breast in the foreground), or a mark on the image, indicates the part of the body that needs to be healed

nothing more sinister than bad luck; until a Brazilian friend, a Macumbista who claimed to have psychic powers, told him that 'his paths had been closed' by Quimbanda.

At first St Clair thought this was superstitious nonsense. Soon afterwards, however, he received a message from a Spiritualist source: his maid, a woman named Edna, had employed black magic against him. Each week, it was alleged, she took a used item of his clothing to a Quimbanda ceremony; there it was buried while 'crossing spells' were chanted and ceremonial candles burned around it. In addition to this, said the Spiritualist, Edna was adding a magical 'closing powder' to his food. St Clair was still sceptical, but he had seen too many strange things in Brazil to discount completely the idea that black magic was being used against him. He decided to fight fire with fire, and to attend a Macumba ceremony himself and consult one of the possessed.

Rituals and dances often take place at night and can last for hours. Here fatigue is evident on the faces of the followers who urge on the dancers with their rhythmic clapping

The first part of the ceremony he attended followed the conventional pattern of drumming, dancing and possession.

But then something extraordinary happened. The priestess, who was wearing the customary Macumba vestments and regalia – a spotlessly white blouse and skirt with a gold cross at her breast – suddenly left the temple. When she returned a few minutes later her appearance was completely different. She was clad in filthy red satin tatters; in place of the golden cross was the skull of a human infant, its jaws tied together with black tape, a dead snake wreathed between the staring eye sockets.

Laughing insanely, the priestess seized a bottle of rum, gulped half of it down, and announced that she was Exu, the Macumba equivalent of Satan.

A long conversation ensued between St Clair, 'Exu' and two mediums, one of whom was possessed by 'Satan's dog'. Eventually Exu, who claimed he sometimes did good as well as evil, told St Clair, 'The curse has been lifted, and will come down doubly on the person who placed it on you.'

Within a few days 'the paths opened' for St Clair. His psychological attitude changed for the better and, perhaps because he no longer expected the worst, his health, finances and love-life all improved. Possession of a priestess by a voodoo deity had transformed his outlook on life.

This perhaps is the real power of voodoo, Macumba and other Afro-American spirit religions. It is possible that possession by the gods offers the devotee something of greater therapeutic value to a diseased psyche than do orthodox Western remedies.

Hitler and the holy lance

The holy lance, which pierced Christ's side at his crucifixion, became a talisman for the Teutonic warlords of Europe. In the 20th century it was plundered by Adolf Hitler, who knew its mystical significance all too well. The would-be conqueror of the world linked his destiny with the lance

IN THE STREETS OF VIENNA in 1913, a down-and-out former art student vainly tried to make a living by selling postcard-sized watercolours. Occasionally, driven off the streets by cold, he would wander through the corridors of the Hofburg Museum. Here he was particularly fascinated by a number of valuable pieces known as the Habsburg regalia. And among these the unprepossessing young vagrant, Adolf Hitler, paid special attention to the Holy Lance – reputed to be the spear that pierced Christ's side when he had given up the ghost on the cross.

The legend of the Holy Lance takes its origin from John 19 : 33–37:

> But when they came to Jesus, and saw that he was dead already, they brake not his legs: But one of the soldiers with a spear pierced his side, and forthwith came there out blood and water. And he that saw it bare record, and his record is true: and he knoweth that he saith true, that ye might believe. For these things were done that the scripture should be fulfilled, A bone of him shall not be broken. And again another scripture saith, They shall look on him whom they pierced.

The verse following this tells how Joseph of Arimathaea gained permission to take the body of Jesus and, helped by Nicodemus, laid it in a tomb on the night of Good Friday.

Other oral and written traditions, beginning with the earliest Christians and continuing to the Middle Ages, depict the rich Jewish philanthropist as obsessed with the artefacts associated with the dead Christ. He is said to have preserved the cross itself, the nails, the crown of thorns, and the shroud from which Christ rose on the third day. Through clues left by Joseph, Helena, mother of the first Christian emperor, Constantine, was able to rediscover these relics.

But even before Christ's death, according to the same traditions, Joseph had begun collecting: after the last supper he took charge of the cup in which Jesus had consecrated the bread and wine. After the resurrection, Joseph kept this cup alongside the spear of John's Gospel: the Holy Grail and the Holy Lance.

Joseph's subsequent travels with the Grail

Far left: the blade of the Habsburg spear, reputed to be the lance that pierced Christ's side while he was on the cross. Because it was a holy relic, the iron blade has been extensively repaired with gold and silver during its long history. It is now bound together with wire and an inscribed 'sleeve'

Left: a Roman soldier confirms that Christ is dead by plunging a spear into him, in a painting by Rubens. According to tradition, it was revealed to the soldier at this moment that Christ was truly the Son of God, and the spear acquired enduring magical potency

Right: just one face in the crowds of Germans who exulted at the outbreak of the First World War: Adolf Hitler, poverty-stricken and obscure, but dreaming already of leading the Nordic 'master race' to supremacy

Below: by selling watercolours like this, Hitler scratched a living in Vienna in 1913

and the Lance are the subject of folk tales and legends in almost every country in Europe. In Britain he is said to have hidden the Grail at Glastonbury. Afterwards he thrust his staff into the ground, where it sprouted to become the still-surviving Glastonbury Thorn, which blooms only at Christmas.

Romantic writers, beginning with the French poet Chrétien de Troyes in about 1180, bound up the fate of the Holy Grail and the Holy Lance with the adventures of King Arthur and the Knights of the Round Table, notably with Lancelot, Gawain and Perceval.

Alongside these stories – themselves based on Celtic tradition and scraps of historical fact – there ran a thin thread of evidence that the Lance, at least, had survived the centuries, passed down sometimes through good hands, sometimes through

unworthy ones. With its ownership came power, to be used for great good or for terrible evil.

At least four 'Holy Lances' existed in Europe during the early part of the present century. Perhaps the best-known was in the keeping of the Vatican, although the Roman Catholic Church seems to have regarded it as no more than a curio. Certainly no preternatural powers were claimed for it by the papal authorities.

A second lance was kept in Paris, where it had been taken by St Louis in the 13th century, after his return from the crusades in Palestine.

Another lance, preserved in Cracow, Poland, was merely a copy of the Habsburg lance. The latter probably had the best pedigree of them all. It had been discovered at Antioch in 1098, during the first crusade, but mystery – and possibly imagination – obscured the manner of its finding. Crusaders had mounted a successful siege of the city and had taken control, when a more heavily armed band of Saracens rode up and turned the tables, shutting up the crusaders within the walls in their turn. After three weeks water and food were running low and surrender seemed the only course. Then a priest claimed to have had a miraculous vision of the Holy Lance, buried in the church of St Peter. When excavations at the spot revealed the iron spearhead, the crusaders were filled with a new zeal and rode out to rout their attackers.

Germanic tradition, somewhat at odds with these dates, claimed the Habsburg lance had in fact been carried as a talisman in the ninth century by Charlemagne through 47 victorious campaigns. It had also endowed him with clairvoyant powers. Only when he accidentally dropped it did Charlemagne die.

The lance later passed into the possession of Heinrich the Fowler, who founded the royal house of the Saxons and drove the Poles eastwards – a foreshadowing, Hitler may have thought in later years, of his own destiny. After passing through the hands of five Saxon monarchs, it fell into the possession of the succeeding Hohenstauffens of Swabia. One of the most outstanding of this line was Frederick Barbarossa, born in 1123. Before his death 67 years later Barbarossa had conquered Italy and driven the Pope himself into exile; again, Hitler may well have admired the brutal harshness coupled with charismatic personality that drove Barbarossa to success. Like Charlemagne, however, Barbarossa made the mistake of dropping the lance as he waded a stream in Sicily. He died within minutes of this event.

The fascination of the spear

This was the legend of the weapon now among the Habsburg regalia, which so fascinated the young Hitler. He spent his first visit to the lance studying its every detail. It was just over a foot (30 centimetres) long, tapering to a slender, leaf-shaped point, and at some time the blade had been grooved to admit a nail – allegedly one of those used in the crucifixion. This had been bound into place with gold wire. The spear had been broken, and the two halves were joined by a sheath of silver, while two gold crosses had been inlaid into the base, near the haft.

The evidence of Hitler's personal fascination with the Habsburg lance rests on the testimony of Dr Walter Johannes Stein, a mathematician, economist and occultist who claimed to have met the future Führer just before the First World War. Stein, a native of Vienna, was born in 1891, the son of a rich barrister. He was to be a polymath and an intellectual adventurer until his death in 1957. He took a first degree in science and a doctorate in psychophysical research at the University of Vienna. He became expert in archaeology, early Byzantine art and medieval history; in the First World War, as an officer in the Austrian Army, he was decorated for gallantry.

In 1928 he published an eccentric pamphlet, *World history in the light of the Holy Grail*, which was circulated in Germany, Holland and Britain. Just five years after that Reichsführer Heinrich Himmler

ordered that he be pressed into service with the Nazi 'Occult Bureau', but Stein escaped to Britain.

The Second World War found him in the guise of a British intelligence agent. After helping to obtain the plans for 'Operation Scalion' – Hitler's projected invasion of Britain – he acted as adviser to Winston Churchill on the German leader's occult involvements.

Stein never published his own memoirs, but before his death he befriended an ex-Sandhurst commando officer, then a journalist, Trevor Ravenscroft. Using Stein's notes and conversations, Ravenscroft published a book, *Spear of destiny*, in 1972, which first brought Hitler's fascination with the Habsburg spear to public attention.

What hold could the Holy Lance, a Christian symbol, have on the violently anti-Christian ex-Roman Catholic Adolf Hitler? Already he was given to violent anti-Semitic rantings, and already he was a devout student of Friedrich Nietzsche's *Anti-Christ*, with its condemnation of Christianity as 'the ultimate Jewish consequence'.

Part of the answer lay in a medieval occult tradition regarding the history of the Holy Lance. As the Gospel of John describes, the Roman soldier who pierced Christ had unwittingly fulfilled the Old Testament prophecies (that Christ's bones would not be broken). Had he not done as he did, the destiny of mankind would have been different. According to both Matthew and Mark the true nature of Christ was revealed to the soldier, said to be named Gaius Cassius Longinus, at that moment: 'And when the centurion, which stood over against him, saw that he so cried out, and gave up the ghost, he said, Truly this man was the Son of God.' (Mark 15:39.)

Above: Charlemagne, King of the Franks, became Holy Roman Emperor in AD 800 One of the legends that have grown up around him says that he owed his success in war to the Holy Lance

Below: the triumphal entry of Hitler into Vienna in March 1938. One of the Fuhrer's first acts was to order the removal to Germany of the Habsburg treasure, which included the Holy Lance

To the mind of the occultist, an instrument used for such momentous purpose would itself become the focus of magical power. And as Richard Cavendish succinctly puts it, speaking of the Grail and the Lance in his book *King Arthur and the Grail*:

> A thing is not sacred because it is good. It is sacred because it contains mysterious and awesome power. It is as potent for good or evil as a huge charge of electricity. If it is tampered with, however compelling and understandable the motive, the consequences may be catastrophic for entirely innocent people.

According to Stein, Hitler was fully aware of this concept as early as 1912: indeed it was through Hitler's obsession with the legend of the lance and its power as a 'magic wand' that the two men met. In the summer of 1912 Dr Stein purchased an edition of *Parsival*, a Grail romance by the 13th-century German poet Wolfram von Eschenbach, from an occult bookseller in Vienna. It was full of scribbled marginal commentaries displaying

a combination of occult learning and pathological racism. On the flyleaf its previous owner had signed his name: Adolf Hitler. Through the bookseller Stein traced Hitler and spent many hours with him, appalled but fascinated. Although it was to be years before the poverty-stricken postcard painter took his first steps on the road to power, there was already an evil charisma about the man. Through all the tortuous windings of his discourse one obsession stood out clearly: he had a mystic destiny to fulfil and, according to Stein, the lance held the key.

Hitler described to Stein how the spear had acquired a special significance for him:

> I slowly became aware of a mighty presence around it, the same awesome presence which I had experienced inwardly on those rare occasions in my life when I had sensed that a great destiny awaited me... a window in the future was opened up to me through which I saw in a single flash of illumination a future event by which I knew beyond contradiction that the blood in my veins would one day become the vessel of the Folk-Spirit of my people.

Hitler never revealed the nature of his 'vision'; but Stein believed that he had seen himself a quarter of a century later, in the Heldenplatz outside the Hofburg Museum, addressing Austrian Nazis and ordinary, bewildered Viennese. There, on 14 March 1938, the German Führer was to announce his annexation of Austria into the German Reich – and to give the order to carry the Habsburg regalia off to Nuremberg, spiritual home of the Nazi movement.

A curious priority

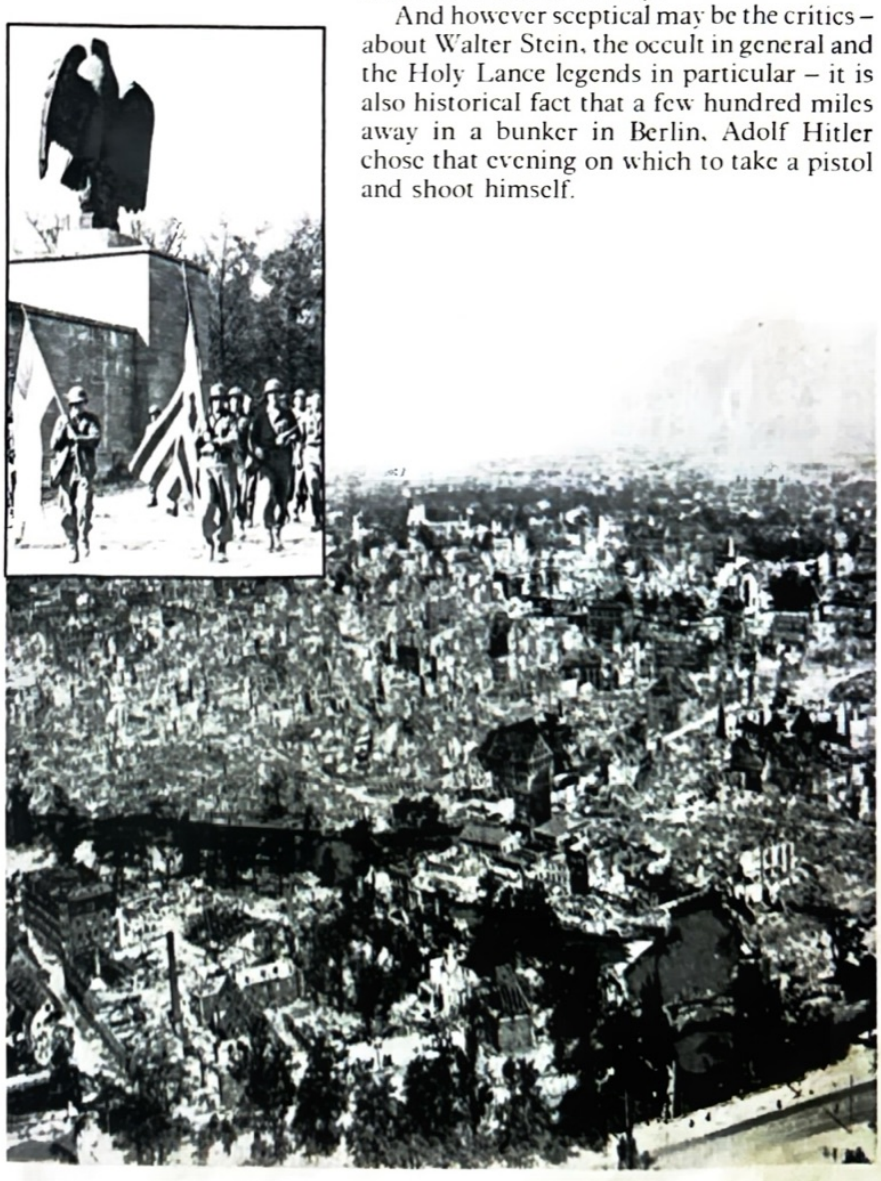
Taking possession of the treasure was a curious priority in view of the fact that Hitler despised the house of Habsburg as traitors to the Germanic race. Nevertheless on 13 October the spear and the other items of the regalia were loaded onto an armoured train with an SS guard and taken across the German border. They were lodged in the hall of St Catherine's Church, where Hitler proposed to set up a Nazi war museum. Stein believed that when Hitler had the lance in his possession, his latent ambitions for world conquest began to grow and flourish.

If Hitler's knowledge of the Habsburg spear's history was as extensive as Stein claimed, he must have been aware of the legends concerning the fate of Charlemagne, Barbarossa and others who had wielded it as a weapon, only to perish when it fell from their grasp. The legend seemed to be confirmed by a chilling coincidence that marked the end of his connection with the Lance.

After heavy Allied bombing in October 1944, during which Nuremberg suffered extensive damage, Hitler ordered the spear, along with the rest of the Habsburg regalia, to be buried in a specially constructed vault.

Left: the closing scene of *Parsifal*. Wagner's last opera Hitler was fascinated by the legend on which the opera is based. Here the enchantress Kundry, redeemed from a life of evil, dies as Parsifal takes the Holy Grail from its shrine. He holds the Holy Lance, which, having been used to work evil by the black magician Klingsor, is an instrument of blessing in the hands of the virtuous Parsifal

Below: the Luitpold Arena in Nuremberg, scene of the Nazis' most spectacular pre-war rallies, saw an informal 'march past' by victorious US soldiers in April 1945 (inset). In the ruins of the shattered city the Holy Lance, with other war booty, was found in a bombproof vault



Six months later the American Seventh Army had surrounded the ancient city, which was defended by 22,000 SS troops, 100 Panzers and 22 regiments of artillery. For four days the veteran American Thunderbird Division battered at this formidable defence until, on 20 April 1945 – Hitler's 56th birthday – the victorious Stars and Stripes was hoisted over the rubble.

During the next few days, while American troops rounded up Nazi survivors and began the long process of interrogating them, Company C of the US Army's Third Military Government Regiment, under their commander Lieutenant William Horn, were detailed to search for the Habsburg treasure. By chance a shell had made their task easier by blowing away brickwork and revealing the entrance to the vault. After some difficulty with the vault's steel doors, Lieutenant Horn entered the underground chamber and peered through the dusty gloom. There, lying on a bed of faded red velvet, was the fabled spear of Longinus. Lieutenant Horn reached out and took possession of the spear on behalf of the United States government. It was the afternoon of 30 April 1945. That much is recorded history.

And however sceptical may be the critics – about Walter Stein, the occult in general and the Holy Lance legends in particular – it is also historical fact that a few hundred miles away in a bunker in Berlin, Adolf Hitler chose that evening on which to take a pistol and shoot himself.

Legions of hell

The Nazi Party's rise to power has been attributed to occult practice. And Adolf Hitler himself was undoubtedly fascinated by the 'black arts'. How and why did this bizarre association develop?

The swastika became the official insignia of the Nazi Party (below: banners at a rally at Nuremberg in 1933) in the 1920s. Sitting on a white disc with a red background, it was a striking symbol, which to Adolf Hitler (right) represented all the ideals of the nationalist movement. Many have seen Hitler's decision to reverse the symbol – to use a 'left-handed' swastika rather than the traditional 'right-handed' one – as an indication of his sinister leanings. And, once a symbol of good fortune, the swastika is now seen as the embodiment of evil itself

IN THE LATE SUMMER of 1940, as the battle of Britain was drawing to its close, Toby O'Brien, then press secretary to Winston Churchill, had an inspiration. He was sitting in his bath one morning when the words of a coarse comic song began to form 'unbidden' in his mind. He repeated his composition over lunch later that day to a group of high-ranking British officers in Whitehall. They were convulsed with mirth. Some of them wrote it down, while others memorised it. Within weeks it had filtered through the ranks and was on the lips of squadron leaders and squaddies, admirals and artificers. Sung to the tune of 'Colonel Bogey' it went:

Hitler, he only had one ball;
Göring had two but very small.
Himmler was very similar,
But poor old Goebbels
Had no balls at all.

Toby O'Brien certainly did not believe his composition was accurate: precious little was known about the sexual endowments or habits of the Führer. But when Russian military surgeons examined Hitler's charred remains in the Berlin bunker in May 1945, they discovered that Hitler was indeed monorchid: he possessed but one testicle. It was a bizarre and extreme coincidence.

But Hitler's defect may have had a profound significance for the development of his occult ideas. According to Dr Walter Stein,

Below. Toby O'Brien who, in 1940, penned an unwittingly accurate lampoon against Adolf Hitler

Long before Guido von List (below) adopted the swastika as the emblem of his neo-pagan movement in Germany in the late 19th century, the 'crooked cross' was a widespread symbol of good luck, of life and of energy. The swastikas on this figure (right), on the handle of a bucket found in the 9th-century ship-burial at Oseberg, Norway, represent the hammers of Thor, god of thunder and of war. Those on the plinth of this statue of Kali (above right), the hideous aspect of the Hindu Goddess, signify a life-giving regenerating force

whose observations on his personal conversations with Hitler in Vienna formed the basis of Trevor Ravenscroft's *The spear of destiny*. Hitler had, as early as 1912, formed a passion for the music of Richard Wagner – particularly for *Parsifal*, which praised Teutonic knighthood and exalted the Aryan race. Soon Hitler discovered Wagner's source: the medieval poetry of Wolfram von Eschenbach. In fact it was through buying a copy of Eschenbach's *Parsival* that had once belonged to Hitler that Dr Stein met him. Dr Stein was impressed by the meticulousness of the marginal notes, though simultaneously appalled by the pathological race hatred that they showed. Among them appeared numerous references to the character Klingsor, whom Hitler apparently identified with the notorious ninth-century tyrant Landulph II of Capua.

Landulph's avaricious grasping for power had led him to study the black arts, and it was for these practices that he was excommunicated in AD 875. But one other fact must have given Hitler a sense of identity with the ninth-century 'Führer'. Landulph seems to have been either partly or totally castrated: Eschenbach described him as 'the man who was smooth between the legs'.

We know that Hitler was easily influenced as a youth, avidly soaking up the ideas of

those – Wagner and Nietzsche, for instance – who impressed him. Landulph's power mania and his unfortunate anatomical similarity to himself must have struck the young Adolf, and there is reason to suspect that Landulph's black magic did so too. Another source gives us a very clear indication that Hitler was impressed by magical symbolism from the beginning of his political career.

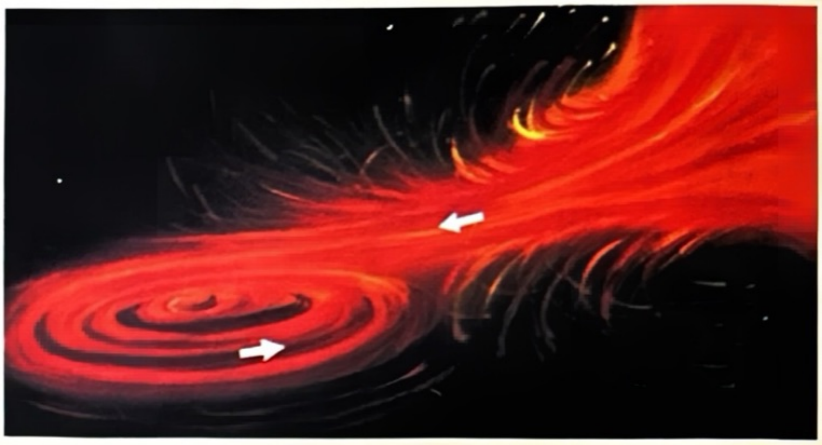
Throughout the latter half of the 19th century, German pseudo-intellectual circles had been obsessed with a movement compounded of pagan ritual and notions of Nordic purity invented by a man named Guido von List. Born in 1848, the son of a

rich trader in leather goods and top boots – pointers, perhaps, to things to come – von List had renounced his Catholicism when he was 14 with a solemn oath that he would one day build a temple to Woden (also called Odin), war god of Scandinavian mythology.

By the 1870s von List had a sizeable group of followers, dedicated to observing 'pagan' feasts at the solstices and equinoxes. In 1875 they attracted attention to themselves by worshipping the Sun as Baldur, the Nordic god, slain in battle, who rose from the dead. The rite was held on a hilltop near Vienna, and concluded with von List burying eight wine bottles carefully laid out in the shape of a swastika.

The swastika had been a widespread symbol of good fortune from earliest times and among all nations; it had been found on Chinese, Mongolian and American Indian artefacts, was used by the ancient Greeks as a pottery decoration, and by medieval architects as a border design for stained glass windows. Its name in Middle English, *fylfot*, is said to mean 'fill foot', since it was a device used for 'filling the foot' of windows. 'Swastika' stems from the Sanskrit *Su asti*, which means, literally translated, 'Good, he is.' In fact the swastika, with its arms 'trailing' as if the whole pattern were spinning clockwise, symbolised the Sun, the powers of light.

In the 1920s, when the National Socialist movement was in its infancy, Hitler asked for designs to be submitted for an easily recognisable symbol, akin to the hammer and sickle of the Russian communists. Friedrich



A world of ice

How did the cosmological theories of a blacksmith-turned-engineer become a mainstay of the Nazi world view?

The man in question was one Hanns Hörbiger (far right), who believed that, among the 'cosmic building stuff' that makes up the Universe, there exists water in its 'cosmic form' – ice. This ice forms itself into large blocks that orbit young stars. Ignoring Kepler's laws of motion, which state that orbiting bodies travel in ellipses, Hörbiger argued that these blocks of ice follow a spiral path, so that they eventually collide with the star (above), causing an enormous explosion. The star ejects a molten mass of rotating matter (above right), which forms a new solar system (right).

Hörbiger's belief that planets follow a spiral path led him to suggest that there were originally four moons orbiting the Earth, of which our present Moon is the only remaining one. The last collision of a moon with the Earth, some 13,000 years ago, he claimed, caused the disappearance of Atlantis – the continent that, the Nazis believed, was the original home of the Aryan race.

Himmler was particularly impressed with Hörbiger's theories, and a treatise on the cosmic ice theory was published as one of a series of handbooks for the SA (the paramilitary wing of the Nazi Party). And Hitler himself declared that he would build an observatory in his home town of Linz, dedicated to the three great cosmologists: Copernicus, Kepler – and Hanns Hörbiger.

Krohn, a Sternberg dentist who was also an occultist, suggested a swastika on a white disc with a red background – red for blood and the social ideal, white for nationalism and purity of race, and the swastika for 'the struggle for victory of Aryan man'.

Hitler was delighted but for one detail – the traditional 'right-handed' swastika was to be reversed to form what the writer Francis King terms 'an evocation of evil, spiritual devolution and black magic'.

Dr Krohn fully realised Hitler's intention in changing the ancient sign, for he was a member of the *Germanenorden* – German Order – which, with the Thule Society, had taken over where von List's rather amateurish organisation had left off in the years before the First World War. Both societies – which eventually became almost interchangeable in ideas and even membership – were originally composed of the German officer class and professions, who were convinced of a massive international Jewish conspiracy backed up by occult practices. To counter this they established their own Nordic occult-based freemasonry, complete with elaborate rituals and robes, Viking helmets and swords. More importantly, the Thule Society – which took its name from the fabled land of Ultima Thule, a sort of paradise on Earth – began to recruit new members from the lower classes and disseminated anti-Semitic material in its various newspapers, one of which, the

Völkischer Beobachter, eventually became the official journal of the Nazi Party.

There is no doubt that Hitler, both in his down-and-out days in Vienna and later, as leader of the rising Nazi Party in the 1920s and 1930s, was constantly fascinated by 'fringe' occult theories. One of these was the lunatic 'World Ice Theory', a complicated set of ideas propagated by an Austrian engineer named Hanns Hörbiger (1860–1931). He claimed that the planets had been created by the collision of stars such as the Sun with huge chunks of ice. Hörbiger claimed that his system enabled him to forecast the weather accurately. Some occult writers, notably Pauwels and Bergier in their *Dawn of magic*, have suggested that Hörbiger's forecasts influenced Hitler's disastrous Russian campaign.

Latterly, Hitler became obsessed with map dowsing – swinging a pendulum over a map to find hidden objects. The topic was brought to the attention of Hitler's aides by an architect named Ludwig Straniak, yet another amateur occultist. Straniak demonstrated to German naval officers his apparent ability to pinpoint the whereabouts of their ships at sea, simply by dangling a pendulum over an admiralty chart. They were particularly impressed when he located the pocket battleship *Prinz Eugen*, at that time on a secret mission.

The 'black magicians'

Hitler's involvement with astrology, and prediction in general, has been much debated. It has even been claimed that he had powers of precognition, which allowed him to foresee the lack of opposition to his invasions of Austria and Czechoslovakia. But Hitler's real talent was as a masterly judge of the European political mood – and even this intuition deserted him when he decided to invade Poland in 1939.

Josef Goebbels, propaganda minister, used astrology cleverly but cynically – quoting Nostradamus, for instance, in support of Nazi domination. Hitler and, in particular, SS chief Himmler took astrology seriously.

In view of this varied preoccupation with the occult, many have suggested that, among high-ranking Nazis, Hitler and Himmler at least were in a real sense 'black magicians'. However, one great question confronts those who claim this. Why, when the Nazis rose to power, were occult writings and practices so rigorously stamped upon – for so they were?

In 1934 the first move was made when the Berlin police issued a ban on all forms of fortune-telling, from fairground palmists to society astrologers. That the orders came from central headquarters is certain, for the police officers who carried out the orders were extremely confused as to the intention behind them. They both impounded 'innocent' books and let go books of magic spells and similar works.

Next came a general supression of all occult groups, even – to the chagrin and surprise of members – the German Order and the Thule Society. Both these contained many Nazis, of course, but even for these there was no exemption. For instance, Jörg Lanz von Liebenfels, whose writings inspired much of the German racial mystique, and who boasted that by introducing Hitler to occult groups he had been his 'guru', was told that he must not publish occult works in future.

Top: the German pocket battleship *Prinz Eugen*, which occultist Ludwig Straniak located simply by swinging a pendulum over a map. After hearing of Straniak's impressive demonstrations, Hitler himself became interested in – then obsessed with – map dowsing

Above: Josef Goebbels, Hitler's minister for propaganda and enlightenment. Although no believer in the occult, he recognised Hitler's fascination for the subject and skilfully used it as a psychological weapon to further the Nazi cause among the German people

With the sole exceptions of 'inner party members', such as certain of Himmler's personal SS aides, occultists of all shades had been done away with or driven underground in German-occupied countries by 1940.

The answer to the enigma has been pointed out by such writers as Francis King and J. H. Brennan. They argue that in regimes that in some ways are analogous with Hitler's – Mao's China, for instance, and Stalin's Russia – there was no such systematic weeding out of occultists. True, Stalin pounced on freemasons, cabalists, and the like, but only because they were 'secret societies' *per se*, not because of their 'magical' activities. In China, even after the Cultural Revolution, seers and astrologers were frowned upon as superstitious, but nothing desperate was done against them. They were more mocked at than persecuted. Authoritarian regimes do not seem to fear magical practices as such.

But Nazi Germany had to trample down 'freelance' occultists, because it was in effect trampling down its own rivals – in much the same way that Trotskyites suffered under Stalin.

There was only one occult movement permissible under the Third Reich, and it was hidden deep in its coils. It was led by the supreme magus, Adolf Hitler, and his acolyte, Heinrich Himmler: both of them powerful black magicians.

Was Hitler a black magician?

Adolf Hitler had an extraordinary ability to influence others. But was his charisma due to sheer strength of personality, to hypnotic skills – or to diabolical magic? Could he literally bewitch people?

THE GOAL OF EVERY MAGICIAN is power over natural forces. He aims to seize the infinite forces of the cosmos and wield them like a sword in his own service. A magician who seeks this power for his own ends, without the wish to serve any higher good, is a 'black' magician. According to most magical schools of thought he pays a high price in the end for his pride. Often he becomes possessed by the spirits he calls upon and is destroyed by them. In the view of several occultists, Adolf Hitler was a powerful black magician.

According to one of Hitler's few friends from his early years in Linz, his personal power had developed by the time he was 15 years old, and very startling it was. On one occasion:

> Adolf Hitler stood in front of me and gripped my hands and held them tight. . . . The words did not come smoothly from his mouth as they usually did, but rather erupted, hoarse and raucous. . . . It was as if another being spoke out of his body and moved him as much as it moved me. It was not at all a case of a speaker carried away by his own words. On the contrary; I rather felt as though he himself listened with astonishment and emotion to what burst forth from him with elemental force. . . .

Below Karl Donitz, commander of the U-boat fleet, met Hitler as infrequently as possible, because he felt the Fuhrer's 'powers of suggestion' impaired his judgement

The writer of this excerpt was August Kubizek. He was describing a midnight walk in 1904 with the 15-year-old Hitler following a performance of Wagner's opera *Rienzi*, which tells the story of the meteoric rise and fall of a Roman tribune. Hitler's inspired speech concerned the future of Germany and 'a mandate which, one day, he would receive from the people to lead them from servitude. . . .'

According to Kubizek, Hitler spent a great deal of time studying oriental mysticism, astrology, hypnotism, Germanic mythology and other aspects of occultism. By 1909 he had made contact with Dr Jörg Lanz von Liebenfels, a former Cistercian monk who, two years previously, had opened a temple of the 'Order of New Templars' at the tumbledown Werfenstein Castle on the banks of the Danube.

Von Liebenfels had assumed his

aristocratic-sounding name: he was born plain Adolf Lanz and came of solid bourgeois stock. His following was small but wealthy. A disciple of Guido von List (see page 161), he flew a swastika flag from his battlements, performed ritual magic and ran a magazine entitled *Ostara*, a propaganda journal of occultism and race mysticism, to which the young Hitler became an avid subscriber. In 1932 Von Liebenfels wrote to a colleague:

> Hitler is one of our pupils . . . you will one day experience that he, and through him we, will one day be victorious and develop a movement that will make the world tremble.

The Italian dictator Benito Mussolini visited Hitler in Germany in 1943, mentally exhausted and deeply depressed. Yet Hitler's influence and the force of his personality were so strong that, according to Josef Goebbels, after only four days in his company Mussolini underwent a complete transformation

One of this ex-monk's pronouncements was that human breeding farms should be set up 'in order to eradicate Slavic and Alpine elements from Germanic heredity', prefiguring Himmler's idea of an SS stud farm by over 20 years.

By the onset of the First World War, Hitler seems to have developed an unshakable conviction of his own high destiny: as a messenger at the front he took enormous risks as if he knew that fate would not allow him to die just yet. By the time the war ended he had developed that curious, impersonal power over those around him that was to stand him in such good stead until late in his career.

Again and again the idea that Hitler was 'possessed' was echoed in the writings of those who knew him. His uncanny hold over individuals was a bugbear to those in the highest echelons of the state. Once, for example, Dr Hjalmar Schacht, Hitler's financial wizard, asked Hermann Göring to speak to Hitler about a minor point of economic policy. But in Hitler's presence Göring found himself unable to raise the matter. He told Schacht: 'I often make up my mind to say something to him, but when I meet him face to face my heart sinks. . . .'

Grand Admiral Karl Dönitz was so conscious of the Führer's influence that he avoided his company so as to leave his own judgement unimpaired:

> I purposely went very seldom to his headquarters, for I had the feeling that I would best preserve my power of initiative and also because, after several days at headquarters, I always had the feeling that I had to disengage myself from his powers of suggestion. . . . I was doubtless more fortunate than his staff, who were constantly exposed to his power and personality.

In his diary for 7 April 1943 Josef Goebbels recorded a remarkable instance of Hitler's use of the force of his personality. The Italian dictator Mussolini had visited Germany in a state of deep depression and mental exhaustion:

> By putting every ounce of nervous energy into the effort he [Hitler] succeeded in pushing Mussolini back onto the rails. In those four days the Duce underwent a complete change. When he got out of the train on his arrival the Führer thought he looked like a broken old man. When he left again he was in high fettle, ready for anything.

In March 1936 Hitler made a statement that precisely summed up the impressions of those who knew him best: 'I am going the way Providence dictates,' he said, 'with the assurance of a sleepwalker.' It was as if something else – not his own mind and soul – was in charge of his every action.

This ruling spirit, if such it was, was not always kind to its host. Hitler's frantic, screaming rages, when he would literally froth at the mouth and fall to the floor, are well-documented. Even more frightening is the account given by his confidant Hermann Rauschning in his book *Hitler speaks*:

> He wakes up in the night, screaming and in convulsions. He calls for help, and appears to be half paralysed. He is seized with panic that makes him tremble until the bed shakes. He utters confused and unintelligible sounds, gasping as if on the point of suffocation. . . .

Hitler was not certain at all times of his

Above: children born in the Steinhöring *Lebensborn*, one of many SS breeding farms set up by Heinrich Himmler to ensure the production of a Nordic 'super race'

Left: Hitler's ability to mesmerise individuals and groups, as at this informal gathering of his followers in Munich in the mid 1930s, led many to believe that he had supernatural powers

Left Hitler laying the foundation stone of the House of German Art in Munich in 1933. The hammer used in the ceremony shattered; Hitler saw this as an ill omen and he was despondent for months. In January 1934 the architect of the building, Paul Ludwig Troost (below), died and Hitler's fears were allayed – he saw the incident as nothing but a warning of Troost's death

Bottom the Externstein rocks in Lower Saxony, West Germany, which became a centre for Nazi neo-paganism in the 1930s

'guiding spirit's' intentions. He suffered from a horror of ill omens. Albert Speer, who became Hitler's personal architect and finally Germany's minister of war production, recounted an incident in October 1933 that shook Hitler's confidence more than anything up to that point had been able to do. He was laying the foundation stone of the House of German Art in Munich, which had been designed by his friend Paul Ludwig Troost and which Hitler felt embodied the highest ideals of Teutonic architecture. As he tapped the stone with a silver hammer, the instrument shattered to fragments in his hand. For almost three months Hitler was wrapped in morbid gloom; then on 21 January 1934 Troost died. Hitler's relief was immediate. He told Speer: 'When that hammer shattered I knew at once it was an evil omen. Something is going to happen, I thought. Now we know why the hammer broke. The architect was destined to die.'

Sorcerer's apprentice

Josef Goebbels pretended to an interest in the occult and in astrology in order to please the Führer – even going so far as to gain proficiency in drawing up a horoscope. Rudolf Hess may have dabbled in occult matters. But there was only one true 'sorcerer's apprentice' in Hitler's inner circle.

Heinrich Himmler was born of middle-class parents in Munich in 1900. A weak, pale and characterless youth, whose defective eyesight compelled him to wear thick-lensed spectacles, Himmler became a fervent Nazi in the early 1920s and was appointed secretary to the Nazi Party propaganda office in Lower Bavaria. There in his little office he sat and talked to a portrait of Hitler on the wall, long before he met the man himself. Although he had indubitable organising ability, Himmler's appearance made him something of a laughing stock, and it was almost jocularly that Hitler appointed him Deputy Reichsführer of the SS – the *Schutzstaffel*, or protective force, a body of about 300 men dedicated to bodyguard duties.

But by 1933 Himmler had built up the SS to such a strength that he was confident enough to purge it – retaining only men of the finest 'Germanic' physical characteristics and insisting that its officers should be able to show a non-Jewish ancestry going back to 1750. After a lengthy quasi-mystical novitiate, recruits were given a ceremonial dagger and permission to wear the full black uniform of the SS, complete with silver death's head. Thereafter they were obliged to attend what Francis King, author of *Satan and the swastika*, describes as 'neo-pagan ceremonies of a specifically SS religion devised by Himmler and clearly derived from his interest in occultism and the worship of Woden.'

Himmler had abandoned his Catholic faith for spiritualism, astrology and mesmerism in his late teens. He was convinced that he was the reincarnation of Heinrich the Fowler, founder of the Saxon royal house, who died in 936. All these elements were incorporated into his SS 'religion'.

Himmler devised new festivals to take the place of such Christian events as Christmas and Easter, he wrote out baptism and marriage ceremonies – though he believed polygamy would best serve the interests of the SS élite – and he even issued instructions on the correct manner of committing suicide.

The centre of the SS 'cult' became the castle of Wewelsburg in Westphalia, which Himmler bought as a ruin in 1934 and rebuilt over the next 11 years at a cost of 13 million

marks. The central banqueting hall contained a vast round table with 13 throne-like seats to accommodate Himmler and 12 of his closest 'apostles' – making, as some occult writers have pointed out, a coven of 13. Beneath this hall was a 'Hall of the Dead', where plinths stood around a stone table. As each member of the inner circle of the SS died, his coat of arms would be burned and, together with his ashes, placed in an urn on one of these plinths for veneration.

In this slightly ludicrous atmosphere of theatricality, Himmler instigated the systematic genocide carried out by the Third Reich in its last years. Millions of Jews, gypsies, homosexuals and others who did not conform to the ideas of the Führer and of himself were slaughtered. Many of the atrocities were prompted by Himmler's bizarre theories. For example, his belief in the power of 'animal heat' led to the experiments in which victims were exposed in freezing water and then revived – if they were fortunate – by being placed between the naked bodies of prostitutes. On another occasion, he decided that statistics should be collected of the measurements of Jewish skulls; but only the skulls of the newly dead would be suitable, so hundreds of people were decapitated.

Above: the castle of Wewelsburg in north-west Germany was bought by Heinrich Himmler (top) in 1934 and became the temple of his SS cult. The presence of the gypsy caravan so close to the Nazi shrine would not be tolerated for long, for gypsies were among the millions of non-Aryans exterminated by Himmler in his attempt to 'purify' the Germanic race

Less horrific but equally insane were SS researches into the Rosicrucian movement, the symbolism of the suppression of the Irish harp in Ulster, the occult significance of Gothic towers and the Eton top hat, and the magical power of the bells of Oxford, which, Himmler decided, had put a charm on the Luftwaffe, preventing it inflicting serious damage on the city.

The occult writer J. H. Brennan has gone so far as to suggest that Himmler was a 'non-person', a zombie without mind or soul of its own, drawing power from Hitler like a psychic leech. Francis King has pointed out that the huge Nuremberg rallies, presided over by Hitler at his most 'possessed', fulfil the conditions necessary for what some witch cults describe as a 'cone of power': searchlights pierced the night sky in a conical pattern above vast crowds, which generated a giant surge of emotion centred on the strutting figure of Hitler.

But if Himmler could be magically influenced for evil he could also be influenced for good in the same way. The unlikely instrument of this good was a plump blond masseur and occultist named Felix Kersten. He had been trained in osteopathy and allied skills by a mysterious Chinese doctor named Ko. Dr Ko was also an occultist and mystic, who apparently developed latent psychic powers in Kersten. Success and fame came to Kersten, and he was ordered to attend Himmler, who suffered from chronic stomach cramps, in 1938. Thereafter the SS chief was almost totally dependent on Kersten, who was able on a number of occasions to save hundreds of Jewish lives by his hold on Himmler's mind. A postwar investigating commission concluded that Kersten's service to mankind and to the cause of peace was 'so outstanding that no comparable precedent could be found for it in history.'

Awesome power

By what appears to have been sheer force of will, for instance, Kersten persuaded Himmler on more than one occasion to defer the extermination of concentration camp prisoners. Kersten would 'worry away like a terrier' until Himmler dropped the whole business. The masseur also managed, with at least partial success, to influence Himmler through deliberate misinterpretation of horoscopes – in which Himmler believed more fervently, perhaps, than Hitler himself.

From the middle of 1942 Kersten was busy sowing in Himmler's mind the notion that he should try to make a separate peace with the Western Allies; though he drew the Reichsführer to the brink on several occasions, he was unable to counteract the awesome power wielded by Hitler himself.

As Francis King has pointed out, Hitler's policies as Germany approached its collapse tallied exactly with what could be expected of a black magician's pact with evil powers. The essence of such a pact lies in sacrifice: an orgy of blood and destruction.

'Losses,' Hitler told Field Marshal Walther von Reichenau, 'can never be too high. They sow the seeds of future greatness.' And the historian Hugh Trevor-Roper said: 'Like an ancient hero, Hitler wished to be sent with human sacrifices to the grave.'

Hitler, although he knew all hope had gone, waited in his bunker until 30 April 1945 before shooting himself, with Eva Braun, whom he had just married. The date was too significant to occultists to be a coincidence. It was the day that ends in Walpurgis night – the high feast of the powers of darkness.

On the side of the angels

John Dee was a respected scholar who had more than a scholarly interest in magic. For he claimed to have found a way to talk to the angels and use their secrets to develop 'Enochian' magic. Or was he deceived by a sinister and cunning medium?

JOHN DEE RATES AN ENTRY in most standard reference works for his contribution to the mathematical and navigational knowledge of 16th-century England. Yet this same man believed he had learned the secrets of the angels: what went on in heaven and which angels controlled various parts of the world, for example. Did he actually communicate with the angelic spirits? Or was he the victim of self-delusion and the deception of a cunning medium?

The majority of those who have studied Dee's life and opinions have come to the latter conclusion. The *Biographica Britannica*, for instance, describes him as having been 'extremely credulous, extravagantly vain and a most deluded enthusiast'.

Occultists tend to take a very different view – particularly those inclined to what has been called the 'Western Esoteric Tradition'. This is the synthesis of European astrology, ritual magic, alchemy and other techniques of practical occultism as developed by S.L. MacGregor Mathers and his associates of the Hermetic Order of the Golden Dawn in the late 19th century. It also incorporates some of the principles of Dee's system, called 'Enochian magic' and based on his presumed mastery of the language of the angels, called 'Enochian'. Many believe that Dee did learn the angels' tongue. And some argue that Enochian magic is of great significance and value. For, unlike other systems, it is not concerned with demons or devils and, because the language is of heavenly origin, it is supposed to enable the magician to control spirits more successfully.

But whether Dee was wise or foolish, an obsessed eccentric or a magus, there can be no doubt of his scholarship. His library, the printed and manuscript contents of which cost him more than £3000 (somewhere around £150,000 at today's value), was a very large one for the period. It included works on every subject with which 16th-century scholars concerned themselves. Theology, mathematics, geography, navigation, alchemy, astronomy, astrology and ritual magic – all were represented.

Dee was born on 13 July 1527 at Mortlake, now a London suburb, then a pleasant Surrey village. In view of the importance he always attached to astrology, it is interesting to note that, at the hour of his birth, the Sun was in Cancer and the zodiacal sign of Sagittarius was on the horizon. This combination, according to astrological devotees, is favourable for a career based on scholarship and the study of secret sciences.

These astrological indications were certainly confirmed when, at the age of 15, he became an undergraduate at Cambridge and commenced his studies with great intensity. As he himself recorded:

> I was so vehemently bent to studie, that for those years I did inviolably keep

Left: John Dee, known as a scholar in reference books and as the developer of a system of magic in books on the occult. The preface he wrote for the first English translation of Euclid's work was said to have encouraged the revival of interest in mathematics in England in the 16th century. There are some who say he probably did the actual translation, though he did not get the credit for it

Top left: Dee's crystal ball, used by the mediums through whom he worked

Top: the talisman of wax made by Edward Kelley, Dee's partner in magic, on directions from an angel. The angels' language was called 'Enochian' by Dee

Above: part of a manuscript owned by Dee, which gives instructions for invoking Venus in ritual magic

> this order; only to sleepe four houres every night; to allow to meate and drinke (and some refreshing after) two houres every day; and of the other 18 houres all (except the times of going to and being at divine service) was spent in my studies and learning.

Dee's efforts received their due reward and, in 1546, he was appointed Greek under-reader, a sort of junior professor. He was also made a fellow of the newly founded Trinity College. But even at this early stage of his career there were whispers that he dabbled in black magic. Some even suspected that an ingenious mechanical beetle he devised for use as a special effect in a Greek play was a creature from hell.

The next 30 years or so of Dee's life were eventful, exciting, and sometimes perilous. He travelled widely in Europe, lecturing at ancient universities and making friends among the scholars; he became interested in the 'angelic magic' expounded by Abbot Trithemius in his influential manuscript *Steganographia*; and he cast the horoscopes of the great men and women of his time.

It was this last activity that, in 1553, during the reign of 'Bloody Mary', brought Dee into danger.

At the time, Queen Mary's half-sister, the Princess Elizabeth, was being held in semi-confinement, suspected of plotting with Protestant malcontents to overthrow the Queen and place herself on the throne. Through one of her ladies-in-waiting, Blanche Parry, the Princess entered into a correspondence with Dee, which eventually resulted in the astrologer showing her Queen Mary's horoscope.

Through the agency of two informers, the links between Dee and Elizabeth were conveyed to the Queen's council. Immediately the unfortunate astrologer was arrested and thrown into prison. Not only were his astrological researches into the probable duration of Mary's life regarded as near treason, but it was believed likely that he was attempting to murder her by black magic.

Eventually Dee was cleared of the charges of treason, but he was immediately re-arrested as a suspected heretic. He gained his final release in 1555.

In 1558 Mary died and Elizabeth became queen. Dee enjoyed Elizabeth's favour as her astrological adviser. It was he who selected a propitious date for her coronation; it was he who was called upon for advice when it was suspected that sorcery was being employed against her.

Nevertheless, Dee's life was not entirely happy. He was perpetually short of money, spending most of his income on his library and his alchemical experiments. And he was distressed by the continued suspicions of many that he was, to quote his own words, 'a companion of hellhounds, and a caller and conjuror of damned and wicked spirits'.

Talking with angels

It is likely that those who regarded Dee in this light would have believed their worst suspicions confirmed if they had known of Dee's experiments in communication with the angels, which he began in October 1581.

The six months before this were troubled ones for Dee. His sleep was much disturbed, his dreams were peculiar, and there were mysterious knockings in his house. As the Australian philologist and writer on Enochian magic Dr Donald Laycock has remarked, it would seem that the spirits wished to contact Dee, rather than the other way round.

Dee worked through a medium, the first being Barnabas Saul who claimed to be able to see angels and other spirits in a magic crystal. But Dee was not satisfied with Saul and dismissed the seer after a few months.

On 8 March 1582 a new medium approached Dee, one Edward Kelley, a strange young man whose antecedents were obscure. He was only 27 years old but his short life seems to have been full of mystery, danger and questionable deeds. He had been a student but had not taken a degree. He had been a notary and, accused of forgery in the course of his work, was said to have had his ears cropped for his offence. He had employed ritual magic in the search for buried treasure. He had studied alchemy and was in possession of strange elixirs, powders and cipher manuscripts. Most sinister of all, he was reputed to practise necromancy, the rite

of raising the dead for the purposes of prediction and divination.

At first Dee was suspicious of Kelley, but not for long. For Kelley saw the angel Uriel in Dee's 'shewstone' and was given instructions for the manufacture of a powerful talisman, and this convinced Dee of his magical powers.

The association between Dee and Kelley lasted for seven years. The two held hundreds of seances, the first at Mortlake in Surrey, the last at Cracow in Poland – for, on the instructions of the angels who spoke through Kelley, the two men and their families wandered thousands of miles up and down Europe. Records of many of their experiments, carefully compiled by Dee, have survived to the present day. They are often virtually meaningless to the modern reader who has not made a specialised study of Elizabethan magic and alchemy. But they do contain passages that seem to be precognitive. Take, for example, the following exchange that took place between Dee and the angel Uriel on 5 May 1583:

Dee: As concerning the vision which was presented yesternight (unlooked for) to the sight of Edward Kelley as he sat at supper with me, in my hall, I mean the *appearing of the very sea*, and many ships thereon, and the cutting of the *hed of a woman*, by a tall black man, what are we to imagine thereof?

Uriel: The one did signify the provision of foreign powers against the welfare of this land: which they shall shortly put into practice. The other, the death of the Queen of Scots: it is not long unto it.

In other words Uriel, speaking through Kelley in the year 1583, was specifically prophesying an attempt at the invasion of England by some large fleet, and the execution of Mary Stuart, Queen of Scots. The reference to the executioner as a 'black man' in that day could have meant the executioner in his black hood.

Mary was executed in 1587 and the attempted invasion by the Spanish Armada came in 1588.

But little of the information supplied by the angels was as specific as this. Much of it consisted of obscure magical, mathematical and, particularly, linguistic teaching. The language of Enochian was, according to Uriel and his fellows, that spoken in the Garden of Eden. Lengthy discourses were dictated to Dee in this tongue – at first sight gibberish. For instance, *micaolz olprt* means 'mighty light' and *bliors ds odo* means 'comfort which openest'. Sometimes translations were obligingly provided by the angels. From these it is clear that Enochian is more than mere strings of syllables. It exhibits traces of syntax and grammar and has the rudiments of language.

Dr Laycock has carried out a detailed study of Enochian and, in the introduction to

Right: a depiction of Kelley raising the dead in the churchyard of Walton-le-Dale in Lancashire. Kelley was a man of ill repute with a shady past, but he won Dee's confidence on the basis of his genuine psychic skills

Far right: a manuscript in Dee's own hand, recording one of his conversations with the angels

Queen Mary (left) and Queen Elizabeth (below left) were prominent in Dee's life. The first imprisoned him for showing his horoscope of her to Princess Elizabeth. She in turn, when queen, made him her astrological adviser

Below: the Spanish Armada, sent against England in 1588. Five years before, Dee had learned about the invasion in a conversation with the angel Uriel who, as usual, spoke through Kelley

his *Complete Enochian dictionary* (1978), he concludes that its structure and grammar is remarkably similar to English. In spite of his scepticism about the language, Dr Laycock is prepared to admit that there may be something in Enochian magic. He remarks:

> I have known well people who have pursued the study of Enochian from the point of view of practical occultism, and who claim that, whatever the origin of the system, it works as practical magic.

The seance on 17 April 1587 was the beginning of the end for the Dee–Kelley association. On that day, an angel calling herself Madimi gave instructions that the two men should sleep with each other's wives. Dee was deeply disturbed by this, wondering whether devils were impersonating angels; but the spirits urged him on: '. . . in hesitating you sin. . . . All these things . . . are permitted to you.' Dee still hesitated but, on 22 May, gave in and the wife-swap finally took place.

This event placed too much of a strain on the Dee–Kelley relationship and Dee returned to England, giving up all practice of magic. He died in poverty in 1608. Kelley preceded him in death, killed abroad in unknown circumstances in 1595.

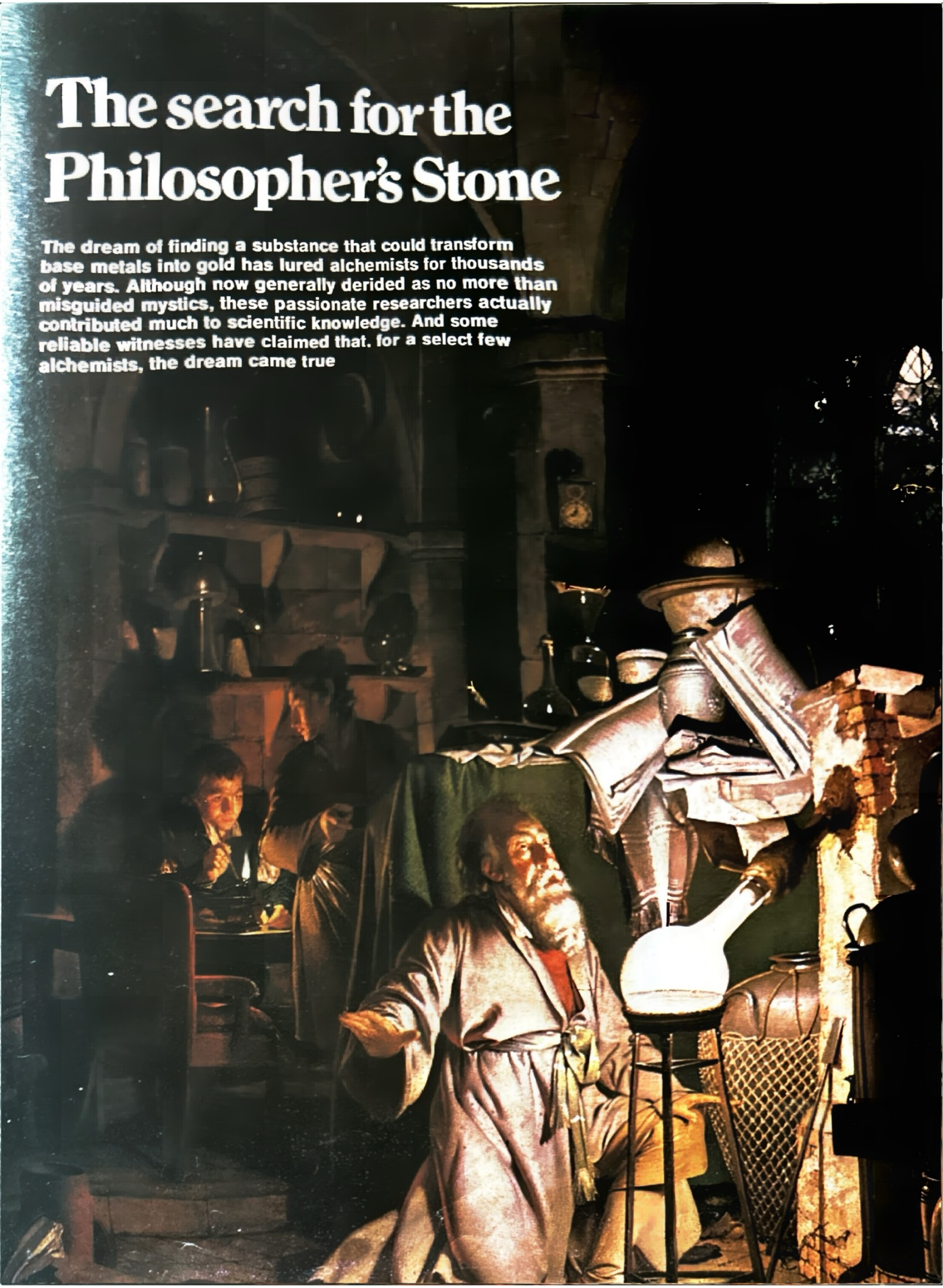
What of the value of the Enochian magic, the Enochian language, and the other occult teachings conveyed to Dee and Kelley by their supposed angels? No one can be quite sure. But there is a lot to be said for the point of view expressed by Dr Laycock: 'If the true voice of God comes through the shewstone at all, it is certainly as through a glass darkly.'

The alchemist's art

The search for a substance that can turn base metals into gold has fascinated men for centuries. Those who believe in the existence of the Philosopher's Stone are convinced that when they find it, they will also have discovered the Elixir of Life.

The search for the Philosopher's Stone

The dream of finding a substance that could transform base metals into gold has lured alchemists for thousands of years. Although now generally derided as no more than misguided mystics, these passionate researchers actually contributed much to scientific knowledge. And some reliable witnesses have claimed that, for a select few alchemists, the dream came true



TWO DAYS AFTER CHRISTMAS in 1666, an unprepossessing stranger visited Johann Friedrich Schweitzer, physician to the Prince of Orange. He was

> of a mean stature, a little long face, with a few small pock holes, and most black hair, not at all curled, a beardless chin, about three or four and forty years of age (as I guessed), and born in North Holland.

It is clear that Schweitzer – the author of one or two books on medical and botanical matters – was a careful and objective observer.

After some idle conversation, the stranger asked Schweitzer whether he would recognise the 'Philosopher's Stone' if he saw it. This was an astounding question. The Philosopher's Stone was the goal of the alchemists – a fabled substance that could transmute metals into gold, banish all illness and bestow long and vigorous life.

The visitor produced from his pocket a small ivory box that held 'three ponderous pieces or small lumps . . . each about the bigness of a small walnut, transparent, of a pale brimstone colour'. This, he said, was the substance that men had sought so long. Schweitzer took one of the pieces greedily, and begged the man to give him just a small piece. When he was refused, he contrived to scrape a speck beneath his fingernail.

When the visitor had left, promising to return in three weeks and show him 'some curious arts in the fire', Schweitzer hurried to his laboratory for a crucible. He melted some lead in it, and then added the tiny piece of stone. But the metal did not change into gold: 'Almost the whole mass of lead flew away, and the remainder turned into a mere glassy earth.'

Impatiently, the physician awaited the return of the stranger, half believing that he would not come again; but in exactly three weeks his mysterious visitor was once more at the door. For a long time the stranger refused to let Schweitzer take another look at the marvellous stone, but at last 'he gave me a crumb as big as a rape or turnip seed, saying, receive this small parcel of the greatest treasure of the world, which truly few kings or princes have ever known or seen.'

Most ungratefully, Schweitzer protested that this was not sufficient to transmute as much as four grains of lead into gold; whereupon the stranger took it back, cut it in half, and flung one part in the fire, exclaiming: 'It is yet sufficient for thee!'

Schweitzer then confessed his former theft, and described his lack of success. The stranger laughed and said:

> Thou art more dextrous to commit theft than to apply thy medicine; for if thou hadst only wrapped up thy stolen prey in yellow wax, to preserve it from the arising fumes of lead, it would have penetrated to the bottom of the lead, and transmuted it to gold.

Above: carrying out their investigations blindly, with little understanding of scientific method or the design of experiments, the alchemists nevertheless laid the basis of modern chemical research. Although the alchemical laboratory frequently looked more like a blacksmith's forge, as in this satirical woodcut, the more sophisticated apparatus changed hardly at all in a thousand years

Previous page: the moment at which the First Matter distils over into the receiving flask is caught wonderfully in this painting by the 18th-century artist Joseph Wright of Derby

He promised to return at nine the next morning and show Schweitzer the correct method.

> But the next day he came not, nor ever since. Only he sent an excuse at half an hour past nine that morning, by reason of his great business, and promised to come at three in the afternoon, but never came, nor have I heard of him since; whereupon I began to doubt of the whole matter. Nevertheless late that night my wife . . . came soliciting and vexing me to make experiment . . . saying to me, unless this be done, I shall have no rest nor sleep all this night. . . . She being so earnest, I commanded a fire to be made – thinking, alas, now is this man (though so divine

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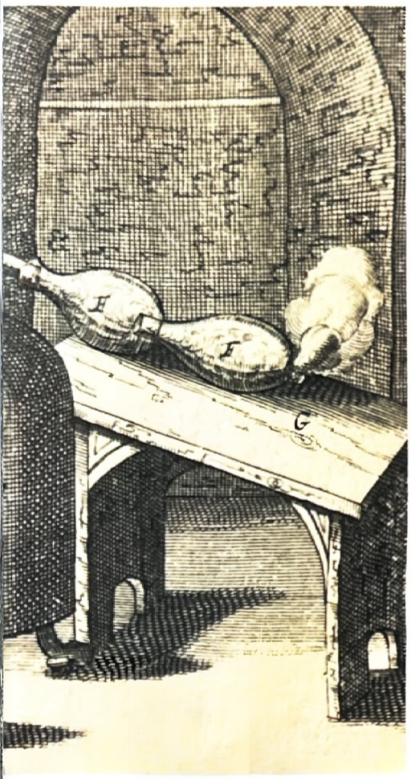
Below: a chemical laboratory of the 17th century, that of Rudolf Glauber. The furnace, A, contains a flask, B. Above the flask a 'pelican', D – a crude distillation device – delivers vapour into a series of vessels known as 'udels', F



Right: an Egyptian wall painting of 1300 BC shows goldsmiths (at the left of the two rows of figures), together with joiners. The smiths could make cheap alloys resembling gold and may have possessed the art of electroplating

Far left: Johann Friedrich Schweitzer, known frequently by the Latinised form of his name, Helvetius, was one of the many scientists who believed they had seen the production of gold from base metals

in discourse) found guilty of falsehood. . . . My wife wrapped the said matter in wax, and I cut half an ounce or six drams of old lead, and put [it] into a crucible in the fire, which being melted, my wife put in the said Medicine made up in a small pill or button, which presently made such a hissing and bubbling in its perfect operation, that within a quarter of an hour all the mass of lead was transmuted into the . . . finest gold . . . .

The philosopher Spinoza, who lived not far away, came the next day to examine the gold, and was convinced that Schweitzer was telling the truth. The Assay Master of the province, a certain Mr Porelius, tested the metal and pronounced it genuine; and Mr Buectel, the silversmith, subjected it to further tests that confirmed that it was gold.

There is nothing in Schweitzer's account itself to inspire doubt; he was a reputable medical man and a trained scientific observer, and not given to fraud or practical jokes. And yet, knowing what we do now about the nature of matter, and in particular about the properties of metals, it is impossible to believe that such a transmutation could have taken place.

Schweitzer was certainly not the only scientist, however, to be convinced by practical demonstration that the Philosopher's Stone truly existed, and that it would effect the transmutation of base metals into gold. Another was Jan Baptista van Helmont, a respected chemical experimenter. He had been responsible for a number of important discoveries and was the first man to realise that there were other gases than air; indeed, the word 'gas' was his invention. He had written, some 20 years before Schweitzer's meeting with the mysterious stranger:

> For truly I have divers times seen it [the Philosopher's Stone] and handled it with my hands, but it was of colour, such as is in Saffron in its powder, yet weighty, and shining like unto powdered glass. There was once given unto me one fourth part of one grain [16 milligrams]. . . . I projected [it] upon eight ounces [227 grams] of quicksilver [mercury] made hot in a crucible; and straightaway all the quicksilver, with a certain degree of noise, stood still from flowing, and being congealed, settled like unto a yellow lump; but after pouring it out, the bellows blowing, there were found eight ounces and a little less than eleven grains of the purest gold.

A fatal blow?

Van Helmont was so impressed with this result that he christened his son Mercurius. Another 17th-century scientist, Rudolf Glauber, the German physician and chemist, believed that he had found one of the ingredients of the Philosopher's Stone in the waters of a spa where he had gone to take a cure. What he found was in fact sodium sulphate, which to this day we know as Glauber's salt – an effective laxative, but not capable of producing gold. No less a thinker than Sir Isaac Newton remained convinced of the possibility of transmutation; so did Descartes, the great French philosopher; and Leibniz, the great philosopher and mathematician. Even Robert Boyle, whose book, *The sceptical chymist*, is generally believed to have struck a fatal blow to any serious belief in alchemy, remained certain to the end of his days that transmutation was possible.

Why were all these scientists convinced that it was possible to change metals into gold? The concept is a very ancient one, which seems to answer to deep human motivations. It came to medieval Europe by way of the Arabs. When they invaded Egypt, which they called Khem, in the seventh century, the Arabs discovered that the

Egyptians were masters of the art of working in gold. They called gold-working *al-kimiya* – 'the art of the land of Khem' – and so, according to one account, the word 'alchemy' was born.

In the great library of Alexandria the Arabs discovered all the writings of the Greek philosophers – in particular those of Aristotle, who lived in the fourth century BC and who can truly be called the first great scientist. The Arabs had the manuscripts copied and translated into Arabic and they found their way all over the Arab world.

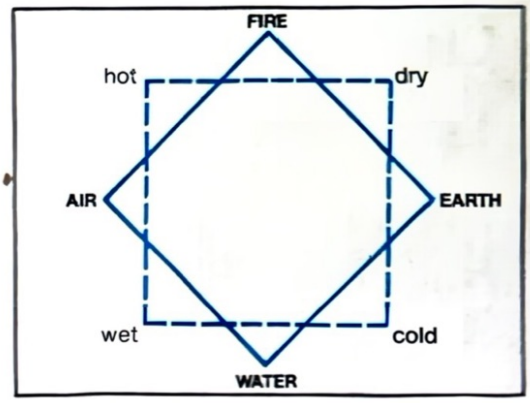
Aristotle believed that the material world was made from 'prime matter', which in itself lacked all physical properties, but on which different 'forms' could be impressed. Form was not merely physical shape, but every specific property of a body or a substance. Among these were four 'qualities': wetness, dryness, heat and cold. These qualities gave rise to four 'elements', or simple substances: fire, which was hot and dry; air (for example, steam), which was hot and wet; water, which was cold and wet; earth, which was cold and dry.

From this scheme of things it was very easy to progress to the idea that every substance was composed of all four elements in various proportions. For instance, consider a piece of green wood heated over a fire. First, water appears in droplets at the end of the wood; then steam and vapour are given off; then the wood burns, apparently releasing fire; and finally ash, or earth, is left. To change one substance into another, therefore, it was only necessary to change the proportions of elements in them by addition or subtraction.

Good as gold

Mankind recognised very early that gold, being virtually indestructible, non-rusting, yet highly malleable, was an ideal medium of exchange. The economy of the major powers is still based on it. Gold almost always appears in the metallic state, commonly in seams or nuggets. Alluvial gold is found deposited in the beds of rivers that have been carrying gold-bearing rocks away for millions of years. Pyrites, or 'fool's gold', is often found close by.

The assaying, or testing, of gold has always been a matter of high importance. Gold jewellery, which must not be damaged, can be weighed and its volume can be measured in order to determine its density: alloys are generally less dense than gold of high purity. In addition, the metal is 'touched' to a touchstone, such as a piece of black jasper, a variety of quartz. The colour of the mark made by gold is different from that made by gilt, brass or copper alloys.



Right: Aristotle's scheme of the four elements. Each possesses the two neighbouring 'qualities'. The earth, water, air and fire with which we are familiar are more or less impure approximations to these ideal substances

Advances in alchemy

Faced with the impressive skills of the Egyptian metal workers, who knew how to colour cheaper metals to make them look like gold, the Arabs naturally supposed that their secret lay in the application of Aristotle's theories. For hundreds of years Arab scientists experimented in their laboratories. They made many important chemical discoveries and they invented most of the apparatus that is still used by chemists today. But they did not discover how to turn base metal into gold. However, one of the earliest Arab philosophers, Jabir ibn Hayyan, made an important contribution to the development of alchemical theory.

Aristotle had regarded the smoke produced in burning as earthy, and contrasted it with the watery vapour produced when water boils. Stones and minerals that were unchanged by the fire supposedly consisted mainly of this earthy smoke, while metals, which became liquid, were formed from the watery vapour.

Jabir suggested that the vapour produced by boiling water was an intermediate stage in its transformation into air. The vapour could be transformed into a material he called

Below: the scientist Jan Baptista van Helmont added his voice in support of the reality of transmutation

mercury, though this was not the familiar metal, but an ideal substance combining the qualities of lustre and liquidity. Earthy smoke was likewise earth in the process of becoming air, and it could be turned into 'sulphur', which combined the qualities of earthiness and combustibility. The various metals and minerals were formed in the earth from combinations of mercury and sulphur.

Jabir investigated what happened when he distilled a wide variety of organic materials – that is, substances derived from living things. In every case he obtained a liquid, which he identified as the element water since it was cold and wet; an 'oil', which, being hot and wet, must be air; a coloured substance – a tincture – that burned, which he thought to be the element fire; and a dry black residue, which he identified as the element earth. He had thus, he believed, isolated the four elements of Aristotle.

He then set out to purify these elements

If a piece of gold-bearing ore is to be assayed, the gold is first extracted. The ground ore is heated in a fireclay crucible with lead oxide and charcoal; molten lead settles at the bottom of the crucible as an alloy with any gold and silver present in the ore. The other mineral contents form a floating liquid slag.

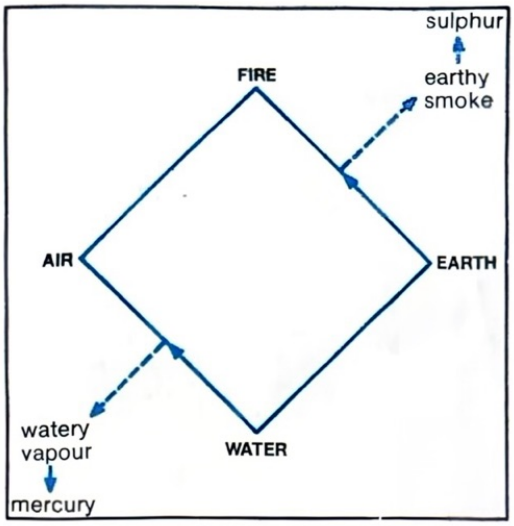
The lead 'button' is then heated gently in a small 'cupel', a vessel made of bone ash. The lead turns back into lead oxide, which is absorbed into the cupel, leaving a bead of gold and silver – together, perhaps, with a small amount of platinum. The silver is 'parted' from the gold by being dissolved in hot dilute nitric acid.

Medieval alchemists discovered that gold would not dissolve in nitric, sulphuric or hydrochloric acids – but that it would dissolve in aqua regia, a mixture of nitric and hydrochloric acids. This led to serious misapprehension, since it was often assumed that anything that dissolved in aqua regia (and a great many substances will do so) was thus proved to be gold.

and isolate each *quality*. By distilling water 700 times, he wrote, he had obtained a brilliant white substance, which crystallised like salt. This, he said, was the purified quality of coldness. He supposed that he would be able to prepare pure moistness from his 'oil', pure dryness from his 'earth', and pure heat from his 'tincture'. He described the last as a transparent substance, brilliant, lustrous and red. This was the substance that the European alchemists named the Philosopher's Stone.

The philosophy of the Greeks returned to Europe, together with all the additions made by the Arabs, when Moslem rule was ended in Toledo, in central Spain, towards the end of the 11th century, and Christian scholars were able to translate the Arabic manuscripts in the library there. Soon after, many Europeans began to experiment with alchemy: they included Albrecht, a churchman and philosopher who became known as 'Albertus Magnus' and was renowned for the breadth and profundity of his learning; Roger Bacon, the learned doctor of Oxford University; and Philippus Aureolus Theophrastus Bombastus von Hohenheim.

This arrogant, boastful, colourful character has given his name to all the languages of Europe, for we now describe such a man as 'bombastic'. But he preferred to call himself Paracelsus, implying that he was greater than Celsus, the first-century writer who had been regarded as the greatest authority on medical matters. It was Paracelsus, writing in an extraordinary mixture of Latin, German and invented words, who took the Arabic word for black eye-paint, *al-kohl*, and gave it to



Right: how Jabir ibn Hayyan modified the theory of Aristotle. Like the original four elements, his 'mercury' and 'sulphur' are idealised substances. They combine, respectively, the qualities of lustre and liquidity, and earthiness and combustibility

Below: the Arab alchemist Jabir, in a fanciful European representation of the 17th century

spirits of wine, which has borne the name 'alcohol' ever since. From the German *all-Geist* he made up the word 'alkahest', denoting a supposed universal solvent that would convert all bodies into their prime matter. And from Jabir's theory of elemental sulphur and mercury he developed an alchemical principle that seems to reveal some kind of intuitive understanding of 20th-century physics. His widespread influence was to be a crucial stimulus to the slow development of modern chemistry. But the pursuit of the Philosopher's Stone and the Elixir of Life was still very far from over.

Right: title page from the 1603 edition of the works of Paracelsus. The author himself is portrayed at the head of the page, and the figure on the right is a representation of Hermes Trismegistos, whose principle 'as above, so below' was the basis of all medieval magical experimentation

The Elixir of Life

One of the aims of the alchemist's work was the discovery of the Philosopher's Stone and the Elixir of Life. Did one practitioner succeed?

'ALWAYS DRUNK AND ALWAYS LUCID' was how a biographer described Theophrastus Bombastus von Hohenheim, who gave himself the name 'Paracelsus'. His career included the study of magic under Hans von Trittenheim at Würzburg in Germany, working for a year at the mining school of Sigismund Fugger, travelling through Germany, Italy, France, the Netherlands, England, Scandinavia and Russia, serving as an army surgeon in Italy and taking a medical degree at the University of Ferrara. He was appointed city physician of Basel, in Switzerland, in 1526, and he celebrated his appointment with a remarkable tirade in the city square.

In one hand he held a brass pan full of glowing coals. Into the fire he thrust the works of Avicenna, the 11th-century Arab philosopher, and of Galen, the second-century Greek medical authority. He sprinkled sulphur and saltpetre over them so that they were consumed in spectacular flames, and spoke:

> If your physicians only knew that their prince Galen – they call none like him – was sticking in Hell, from whence he has sent letters to me, they would make the sign of the cross upon themselves with a fox's tail. In the same way your Avicenna sits in the vestibule of the Infernal portal: and I have disputed with him about his . . . Tincture of the Philosophers, his Quintessence, and Philosopher's Stone . . . and all the rest. O you hypocrites, who despise the truths taught you by a great physician [he meant himself]. . . . Come then, and listen, impostors who prevail only by the authority of your high positions! After my death, my disciples will burst forth and drag you to the light, and shall expose your dirty drugs, wherewith up to this time you have compassed the death of princes. . . .

Above: alchemists grew old and decrepit in their quest for the Elixir of Life. Did some practitioners survive beyond their natural span?

Below: Theophrastus Bombastus von Hohenheim, city physician of Basel and alchemical theorist

In spite of his overweening, egotistical style, Paracelsus was an important influence in the development of the science of pharmacy. He was among the first to recognise that the processes of alchemy were the same as those of baking and cooking – he even dignified the man who lit and tended the fires with the title of 'alchemist'. And moreover, he replaced the four elements of Aristotle by three 'hypostatical principles': mercury, sulphur and salt. The term 'hypostatical' meant that

these were not the ordinary substances: they were, rather, three ideal substances, which a 17th-century text described in these terms:

> *Mercury* is that sharp, permeating, ethereal and very pure fluid to which all nutrition, sense, motion, power, colours and retardation of age are due. It is derived from air and water, it is the food of life.
>
> *Sulphur* is that sweet, oleaginous and viscid [glutinous] balsam conserving the natural heat of the parts, instrument of all vegetation [unconscious activity of plants or animals, such as assimilating food], increase and transmutation, and the fountain and origin of all colours. It is inflammable, yet has great power of conglutinating [sticking together] extreme contraries.
>
> *Salt* is that dry saline body preserving mixtures from putrefaction, having wonderful powers of dissolving, coagulating, cleansing, evacuating, conferring solidity, consistency, taste and the like. It resembles earth, not as being cold and dry, but as being firm and fixed.

Paracelsus saw these three principles in terms of spirit (mercury), soul (sulphur) and body (salt). As he himself put it in one of his alchemical writings:

> But as there are many kinds of fruit, so there are many kinds of sulphur, salt and mercury. A different sulphur is in gold, another in silver, another in lead, another in iron, tin, etc. Also a different one in sapphire, another in the emerald, another in the ruby, chrysolite, amethyst, magnets, etc. Also another in stones, flint, salts, spring-waters, etc.

This kind of thinking led Paracelsus to the search for the 'quintessence' of each material, the refined and purified extract that was the essential part of it. Supposedly he identified this with the 'mercury' specific to that substance. In his public speech in Basel he was contrasting the quintessences of various metals, which he had prepared by distillation, to common 'dirty drugs'.

Two targets of the wrath of Paracelsus: the Greek writer Galen (above), an authority on drugs, and the Arab ibn Sina, known in Europe as Avicenna (below), author of *The canon of medicine*

An innovation in alchemy

The concept of hypostatic mercury, sulphur and salt gave a new impetus to alchemical enquiry; and Paracelsus achieved apparent success in medical treatment with some of his 'quintessences'. They were probably weak acid solutions, pepped up in some instances with alcohol.

The ideas of Paracelsus also encouraged the search for the Elixir of Life. This remarkable substance, which supposedly conferred longevity or even immortality, had reputedly been discovered already. It was important in Chinese alchemy, the story of which will be told later (see page 184). In Europe alchemists were rumoured at various times to have gained immortality. One was Nicolas Flamel.

Flamel was a thrifty and industrious scrivener (a scribe and copyist) in 14th-century Paris. In 1357 he bought a very old and large illuminated book:

> The cover of it was of brass, well bound, all engraven with letters or strange figures. . . This I know that I could not read them nor were they either Latin or French letters. . . As to

What was the Philosopher's Stone?

Early philosophers were convinced that by lengthy processes of purification it must be possible to extract from minerals the natural 'principle' that supposedly caused gold to 'grow' in the earth. The anonymous 17th-century book *The sophic hydrolith* tells us that the Philosopher's Stone is prepared from a mineral by first 'purging it of all that is thick, nebulous, opaque and dark', yielding mercurial water or 'water of the Sun', which has a pleasant penetrating smell and is very volatile.

Part of this liquid is put on one side, and the rest mixed with one twelfth its weight of 'the divinely endowed body of gold' – ordinary gold being useless because it is defiled by daily use. The mixture forms a solid amalgam, which is then heated gently for a week. It is then dissolved in some of the mercurial water in an egg-shaped phial.

Then the remaining mercurial water is added gradually, in seven portions; the phial is sealed, and kept at such a temperature as will hatch an egg. After 40 days, the phial's contents will be as black as a raven's head; after seven more days small grainy bodies like fish-eyes appear.

Gold had to be added to the Philosopher's Stone to make further gold. This is symbolised here by the lion devouring the serpent in order to transform it

The Philosopher's Stone begins to make its appearance: first reddish in colour; then white, green and yellow like a peacock's tail; then a dazzling white; and later a deep glowing red. Finally, 'the revivified body is quickened, perfected and glorified' and appears of a most beautiful purple colour.

Gradually, over the centuries, alchemists came to identify the Philosopher's Stone with the Elixir, the substance that would confer eternal life.

As for the mineral from which the Stone was to be prepared, *Gloria mundi* (1526) says it is 'familiar to all men, both young and old, is found in the country, in the village, in the town. . . No-one prizes it, though, next to the human soul, it is the most beautiful and most precious thing upon earth. . . .'

the matter that was written within, it was engraved (as I suppose) with an iron pencil or graver upon . . . bark leaves, and curiously coloured. . . .

On the first page was written in golden letters: 'Abraham the Jew, Priest, Prince, Levite, Astrologer and Philosopher, to the Nation of the Jews dispersed by the Wrath of God in France, wisheth Health'. Flamel subsequently referred to this manuscript as 'the book of Abraham the Jew'. The dedication was followed by execrations against anyone who was neither priest nor scribe and who might read the book. As Flamel was a scribe, he was emboldened to read further.

The author intended to give the dispersed Jews assistance in paying their taxes to the Roman authorities by teaching them how to transmute base metals into gold. The instructions were clear and easy to follow, but unfortunately they referred only to the later stages of the process. The only guidance to the earlier stages was said to be in the illustrations given on the fourth and fifth leaves of the book. To his great disappointment, Flamel found that, although these pictures were well painted,

yet by that could no man ever have been able to understand it without being well skilled in their Qabalah, which is a series of old traditions, and also to have been well studied in their books.

For 21 years Flamel tried without success to find someone who could explain these pictures to him. At last his wife Perrenelle suggested that he should travel to Spain to seek out some learned Jew who could shed light on the matter. Flamel decided to make the famous pilgrimage to the shrine of St James at Compostela; and so, with his pilgrim's staff and broad-brimmed hat, and carrying carefully made copies of the mysterious illustrations, he set out on foot.

When he had made his devotions at the shrine, he travelled on to the city of León, in northern Spain, where by chance he made the acquaintance of a certain Master Canches, a learned Jewish physician. When he saw the pictures, he was 'ravished with great astonishment and joy', recognising them as parts of a book that he had long believed lost. He made up his mind at once to return with Flamel to France. But at Orléans, wearied and old, he died. Flamel, having seen him buried, returned alone to Paris.

I had now the *prima materia*, the first principles, yet not their first preparation, which is a thing most difficult, above all things in the world. . . . Finally, I found that which I desired, which I also knew by the strong scent and odour thereof. Having this, I easily accomplished the Mastery. . . . The first time that I made projection [accomplished transmutation] was upon Mercury, whereof I turned half a pound [227 grams], or thereabouts,

Left and above left: two pages from an early copy of 'The book of Abraham the Jew' in Paris. The lower picture shows those who seek for gold in the garden; the figure at bottom right, if we may believe Ninian Bres, is Nicolas Flamel himself. In the upper picture, titled 'the three colours of the work', the rider mounted on a black lion represents gold in maceration; the second, on a red lion, represents the inner ferment; and the crowned rider on a white lion symbolises success

Left: a supposed portrait of Nicolas Flamel, from an early 19th-century work

Right: another picture from 'The book of Abraham the Jew'. This has been called 'the fair flower on the mountain'. The red and white flowers stand for stages in the Great Work, the dragons for sophic (that is, 'ideal') mercury, and the griffins for a combination of the lion (the fixed principle) and the eagle (the volatile principle)

Above: an 18th-century engraving of the frescoes that were painted for Flamel in the churchyard of the Holy Innocents in Paris, and which had survived for 400 years. A pair of small figures below the centre represent Flamel and his wife Perrenelle, while the panels at the top show seven of the illustrations from 'The book of Abraham the Jew'. Numerous copies of these pictures were made over the centuries, and it is now very difficult to determine what was in the original

into pure silver, better than that of the Mine, as I myself assayed, and made others assay many times. This was upon a Monday, the 17th of January about noon, in my home, Perrenelle only being present, in the year of the restoring of mankind 1382.

Three months later Flamel made his first transmutation into gold. He and Perrenelle put their new-found wealth to good use: they endowed

> fourteen hospitals, three chapels and seven churches, in the city of Paris, all which we had new built from the ground, and enriched with great gifts and revenues, with many reparations in their churchyards. We also have done at Boulogne about as much as we have done at Paris, not to speak of the charitable acts which we both did to particular poor people, principally to widows and orphans. . . .

After Flamel's death in 1419 the rumours began. Hoping that the Philosopher's Stone might still be hidden in one of his houses, people searched through them again and again, until one was reduced to a pile of rubble. There were stories that both Perrenelle and Nicolas were still alive; that she had gone to live in Switzerland while he buried a log in her grave, and that later he did the same at his own 'funeral'.

In the centuries since, legends have persisted that the wealthy alchemist had defeated death. The 17th-century traveller Paul Lucas, while travelling in Asia Minor, met a distinguished Turkish philosopher. He was told that

> true philosophers had had the secret of prolonging life for anything up to a thousand years. . . . At last I took the liberty of naming the celebrated Flamel, who, it was said, possessed the Philosopher's Stone, yet was certainly dead. He smiled at my simplicity, and asked with an air of mirth: Do you really believe this? No, no, my friend, Flamel is still living; neither he nor his wife has yet tasted death. It is not above three years since I left both . . . in India; he is one of my best friends.

A couple who cheated death

In 1761 Flamel and his wife were said to have attended the opera in Paris. Still later there were stories very reminiscent of those concerning the Count St Germain, who was also supposed to have discovered the Elixir of Life (see page 190). What are we to make of that almost unknown work *Le corbeau menteur* (*The lying raven*) by the 19th-century writer Ninian Bres?

> He was a little less than middle height, stooping somewhat with the weight of years, but still with a firm step and a clear eye, and with a complexion strangely smooth and transparent, like fine alabaster. Both he and the woman with him – clearly his wife, although she appeared almost imperceptibly the older and more decisive of the two – were dressed in a style that seemed only a few years out of fashion and yet had an indefinable air of antiquity about it. I stood, half-concealed in a little archway toward the end of the Boulevard du Temple: my hands were stained with acid, and my topcoat stank of the furnace. As the couple came abreast of the spot where I stood, Flamel turned toward me and seemed about to speak, but Perrenelle drew him quickly on, and they were almost at once lost in the crowd. You ask how I am so confident that this was Nicolas Flamel? I tell you that I have spent many hours in the Bibliothèque Nationale, poring over the book of Abraham the Jew: look carefully at the first side of the fifth leaf and there, in the lower right-hand corner of the representation of those who seek for gold in the garden, you will see the face that searched mine that evening on the Boulevard du Temple, and that has haunted my dreams ever since. . . .

Alchemy: sex and symbolism

Alchemy in both East and West was concerned with the purification of the soul as much as with the transmutation of metals. The two traditions are related to each other and to primitive magic

ALCHEMY GATHERED into its literature a whole bestiary of symbols: the black crow, the white pelican, its breast spotted red with its own blood, on which, by popular belief, its young fed; the phoenix; the dove; the peacock, with its tail of wonderful colours; red and green lions; dragons of all hues. There were human symbols as well: the red man and the white woman, sometimes twined together in sexual union; the king murdered by his own son, and above all the androgyne, or hermaphrodite, which represented the combination of opposites that produced the Philosopher's Stone.

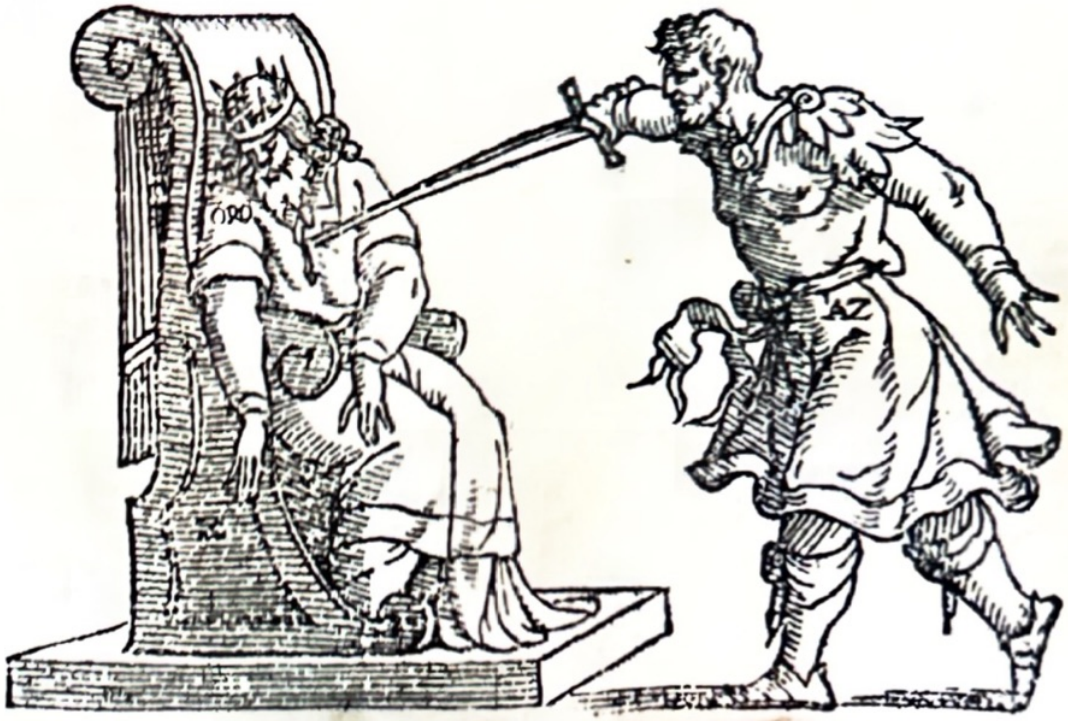
The symbols are so striking and so numerous that they caught the attention of the psychologist Carl Jung, who devoted a whole book to them. Throughout his life, Jung had studied the way in which the same kind of symbols appear to have the same kind of meaning in communities and cultures widely separated in time or place. It was, Jung thought, as if these symbols were a part of mankind's fundamental make-up.

One of Jung's predecessors was Herbert Silberer. In his book *Problems of mysticism and its symbolism* he attaches great importance to the work of one of the first alchemists to set his thoughts down in writing, Zosimos of Panopolis, in Egypt. Zosimos, who lived about AD 300, wrote down some of the secrets of alchemy in terms of a strange vision

> I asked him who he was and in a feeble voice he answered me: I am he-who-is, the priest of the sanctuary, and I am overwhelmed by another's strength. For at break of day came a deputy who

Above: when lead is kept molten in a basin over a furnace, it will form an encrustation of bright yellow crystals of lead oxide, or litharge. Here the aged Saturn symbolises lead, while the gold-crested white dove is the 'sublime' spirit of the lead, its quintessence. That, at least, is one interpretation of this illustration from the 16th-century manuscript *Splendor solis*, but several other equally plausible explanations have been proposed

Right, in this woodcut from *The new pearl of great price* (1546), the crowned king is gold, killed by his son Mercury. After many vicissitudes he rises again



swiftly seized me, cleaving me with a sword and dividing me in pieces; and after flaying all the skin from my head he mixed my bones with my flesh and burned them in the fire. . . .

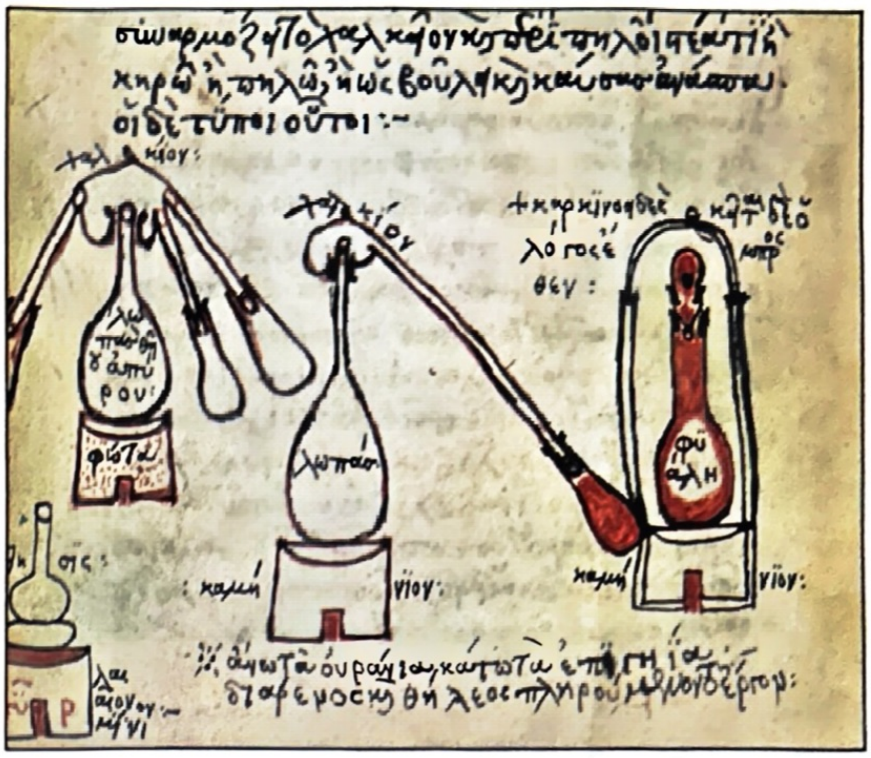
When we look at the illustrations from alchemical works written some 1200 years later, or read the descriptions of the Great Work, it is not really surprising to find the same kind of imagery employed, for in this instance it is easy to trace a direct line of descent. But what is remarkable is to compare the vision of Zosimos with the visions of the shamans, the priests of the nomadic tribes of Siberia and North America.

As adolescents, future shamans were suddenly seized by a 'sickness', a kind of divine madness that was the first sign of their priestly vocation. During this phase they saw extraordinary visions. One future shaman, for instance, described how he saw himself enter a mountain, where a naked man was working a bellows to keep a cauldron heating on a fire. The man seized the shaman with a great pair of tongs, cut off his head and sliced up his body, and threw everything into the cauldron, where it cooked for three years. There were three anvils in the cave, and on one of them the man forged the shaman's head; then he rescued the bones, joined them together, and covered them with flesh.

The mystique of the metalworker

Many of the initiation visions seen by the shamans took similar forms to this, and the famous anthropologist Mercia Eliade has shown that they are closely related to the high priestly standing enjoyed by metalworkers among primitive peoples.

In some very early mythologies, the Sun was seen as plunging every evening into the womb of Earth, sowing the 'seed' of the metals. It was supposed that the metals gradually developed, passing through various stages, until the final result was gold. (We have seen how even the scientist Aristotle believed that the Earth somehow 'bred' metals.)



Top: a 15th-century copy of an alchemical treatise by Zosimos of Panopolis

Above: a travelling Tuareg silversmith from Niger. These artisans are often outcasts, regarded with fear and awe

Left: another tantalising illustration from *Splendor solis*. A fair white woman offers a scarlet cloak to a man emerging from primeval blackness into a ruddy form that is reminiscent in some ways of a new-born child

Metalworkers, who knew how to take mineral ores and, by smelting them in a womb-shaped furnace, to produce metals, and who further understood how to shape the metal produced, were thus performing much the same kind of marvel as the Sun-god himself. They were venerated as priests who stood closer than ordinary men to the god.

It was natural to suppose that, if a man could make himself truly god-like, he would gain the power to transform baser metals into gold, by exactly the same processes that they underwent in the Earth. This belief was expressed on the Emerald Tablet, a record said to have been inscribed by the god Thoth, who was supposed to have taught the ancient Egyptians the sciences and the art of writing. (The Greeks identified Thoth with one form of their god Hermes – Hermes Trismegistos, the 'thrice-great'. Hence the term 'hermetic art' for alchemy.)

The principle of the Emerald Tablet can be expressed in a phrase widely used by alchemists: 'as above, so below'. The tablet appears to have carried a set of mystical instructions for the manufacture of gold by transmutation – the 'operation of Sol'. The seventh of these precepts reads: 'Separate the earth from the fire, the subtle from the gross, acting prudently and with judgement.' The eighth reads: 'Ascend with the greatest sagacity from the Earth to heaven, and then again descend to the Earth, and unite together the powers of things superior and things inferior. . . .' These can be read as straightforward metaphors for separating and recombining elements. The 'ascent' and 'descent' could refer to the circulatory action of a kerotakis, a type of still.

But on another level these same precepts

Above: the Emerald Tablet, as it was imagined by Heinrich Khunrath in his *Amphitheatrum sapientiae aeternae* (*Amphitheatre of eternal wisdom*), which was first published in 1609. Below the Latin text, Khunrath provides a translation into German

could be, and were, taken as referring to a spiritual work of self-purification – a long and arduous liberation of the divine part of the alchemist's nature from the grossness of his body and senses.

All these various strands came together: the primitive belief that the search for a way to transmute base metals into gold involved a succession of god-like actions developed into the belief that an important part of alchemy was the attempt to become like God – 'as above, so below'. From this, no doubt, stems the conviction that the final result of the alchemical quest was to achieve eternal life.

It is striking that, although there is no evidence of any connection between the alchemy of the Arabs (as it was later transmitted to medieval Europe) and that of the Far East, the Chinese alchemists were also concerned with the attainment of immortality. They were undoubtedly very interested in the production of gold, but principally for its value as an elixir. The substance with which they attempted to prolong life was cinnabar, a bright-red compound of two of the vital substances of western alchemy: mercury and sulphur.

The ancient philosophy of Tao is concerned with the delicate blending of two fundamental energies: *yin*, the feminine principle, and *yang*, the masculine. The careful commingling of *yin* and *yang* was believed to be a means of prolonging life.

At the lower levels of Taoist practice, the mixing of *yin* and *yang* could be achieved by controlled sexual intercourse; the more advanced mystics practised various meditative procedures, designed to bring about a kind of 'distillation' of *yang* within the body. These practices were commonly known as 'sexual alchemy'.

The body was seen as a tier of three crucibles (*tan-t'ien*) on a central column. The lowest, the cauldron or three-footed furnace, was in the belly below the solar plexus; the second was behind the solar plexus; the third between the eyes.

The 'prime substance' of this inner alchemy was the primitive sexual energy, *ching*, residing in the lowest crucible. It was one of three forces, the others being *ch'i*, the moving vitality, in the middle crucible and *shen*, the luminous personal spirit, in the upper crucible. Meditation began with rhythmical deep breathing: the 'heavenly fire of the heart' began to circulate and was impelled – as if by a bellows – down to the furnace in the belly. Gradually, as energy rose up the 'distillation column' of the spine, the content of *yang* increased; then, as it

An experiment with immortality

The Tao master Wei Po-Yang went into the mountains one day, accompanied by three disciples and his white dog. The master had concocted a certain 'gold medicine', reputed to be the Elixir of Immortality. He fed a little of the medicine to his dog, which promptly died. Wei Po-Yang said to his disciples: 'To live without taking the medicine would be just the same as to die of the medicine. I must take it.' He did so and, like the dog, expired.

Two of the grief-stricken disciples immediately set off to find implements with which to bury their late master. But the third, Yü by name, was more thoughtful; it seemed to him that Wei Po-Yang must have known what he was doing. Yü therefore took some of the medicine himself, and also died.

A short while later, Wei Po-Yang revived, for his medicine had contained only enough impurity to cause temporary death. He put a little more of the medicine into the mouths of the dog and of Yü, both of whom also recovered after a few moments. Together, the three strolled off into immortality.

Wei Po-Yang lived in the second century AD, and he is credited with the authorship of the treatise *Ts'an-t'ung-ch'i* (*The three ways unified and harmonised*), a work that made Taoism into a coherent system. Among other things it deals with the 'pills of immortality', which, says Wei, are 'extremely efficacious, although their individual size is so small that they occupy only the point of a knife or the edge of a spatula.'

condensed at the top of the head and descended again. *yin* replaced *yang*. Eventually, the heat of the furnace was sufficient to drive the *ching*, transformed, up to the second crucible, where it combined with the *ch'i*. As in the alchemist's vessel known as a pelican, the two were continuously recycled, rising up the central column and then dropping back into the furnace for further purification. As the furnace was fanned to greater heat, the combined *ching* and *ch'i* eventually reached the *shen* in the upper crucible; and suddenly the 'inner copulation of the dragon and the tiger' took place. Su Tung P'o put it this way in AD 1110:

> The dragon is mercury. It is the semen and the blood. He issues from the kidneys and is stored in the liver. The tiger is lead. He is breath and bodily strength. He issues from the mind and the lungs bear him. When the mind is moved, breath and strength act with it. When the kidneys are flushed, then semen and blood flow. . . .

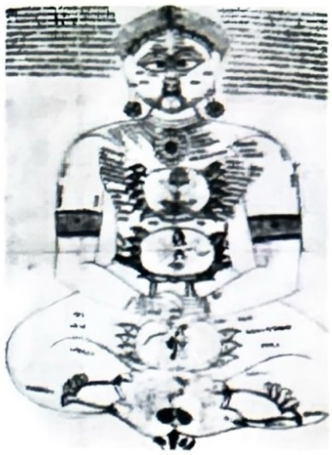
When the *ching-ch'i-shen* was rising and descending like liquid in a briskly bubbling still, it progressively purified until it was one with the energies of the cosmos. Then a special ambrosial fluid flowed like saliva in the mouth. Two lights, gold and silver, slowly descended into the furnace; the body's breathing ceased, to be replaced by the breathing of a foetus formed from the impregnation of the ambrosia by the gold and silver lights. Slowly, the foetus grew into a homunculus, a 'crystal child'; it rose slowly to the crown of the head, and was there born as an immortal.

The alchemy of Tantra

Taoist inner alchemy possesses a striking resemblance to the basic beliefs of Tantra, which is claimed to be the oldest religion of India. The Tantric meditator begins by visualising the inner central column of his spine, the *sushumna*, as the axis of the cosmos. Up the *sushumna* are strung a series of 'wheels', or *chakras*; there are usually six, with a seventh in the top of the skull. The lowest *chakra* is at the base of the pelvis, and here sleeps the serpent Kundalini, coiled around an inner phallus (*lingam*), with its tip in her mouth. By means of various yoga exercises Kundalini is awakened, straightens herself, and enters the bottom of the *sushumna*. The ultimate intention is that Kundalini shall ascend permanently to the top of the skull, where a transcendental sexual union takes place.

The postures that awaken Kundalini are frequently sexual, and even the Tantric ascetic will imagine an ideal girl as Kundalini ascends. The Tantric obtains his energy through sexual intercourse, and the woman is regarded as the possessor of particularly important power.

The Tantric yogi is credited with many abilities, of which one is the transmutation of



Above, in this Indian drawing from the 18th century, the 'subtle body' is represented as a plant growing from the ground. The *chakras*, or centres of energy positioned along the spinal *sushumna*, are shown symbolically by human and animal figures

Above and top right: the close symbolic relationship between Western alchemy and Tantric 'sexual alchemy' is clearly shown in these two pictures, one an Indian popular print of the early 19th century, the other a 16th-century European woodcut. In the upper illustration, the goddess Kali has beheaded herself, and her blood sprays onto the tongues of her attendants, while a couple make love in a lotus flower at her feet. The lower illustration shows the hermetic androgyne, a being formed when the son of Hermes and Aphrodite became united with the nymph Salmacis – a symbol of the union of opposites in chemical reactions

base metals into gold; even his urine and faeces may bring about transmutation. He recognises the importance of mercury and sulphur. As an ancient treatise puts it:

> When quicksilver is killed with an equal weight of sulphur it cures leprosy; when killed with thrice its weight of sulphur it cures mental languor; when it is killed with four times its weight of sulphur it removes grey hair and wrinkles; when it is killed by five times its weight of sulphur it cures consumption; when it is killed with six times its weight of sulphur it becomes a panacea for all the ills. . . .

The close similarity of the imagery – and the substances used – in alchemy in all these very different cultures is striking. A major difference is equally striking: that medieval European alchemy does not seem to have had any explicit sexual basis. It was not until ancient Taoist and Tantric manuscripts became available in translation toward the end of the 19th century that sex entered western alchemy. The magical society called the Golden Dawn taught some kind of esoteric link between the two; Karl Kellner, who founded the Ordo Templi Orientis (OTO) in 1906 was more explicit. And Aleister Crowley, who was a member of both secret societies, seized upon the connection with enthusiasm, and developed his own brand of sexual magic. And then the psychologists who found the symbolism of alchemy so fascinating were to teach that sex is at the heart of all human action.

Alchemy's hidden truth

In the 20th century science has achieved the alchemical dream of transmuting the elements. But modern alchemists still use traditional methods in pursuit of their ancient quest.

THE GROWTH OF experimental science during the 18th and 19th centuries; the work of chemists such as Lavoisier, Priestley and Davy; the establishment of Dalton's atomic theory; and the subsequent discoveries of a host of scientists in all aspects of chemistry and physics – such developments should have sounded the death knell of alchemy. And yet they did not.

During the 19th and early 20th centuries, it is true, alchemists retreated into the mystical, spiritual aspects of their study. They were drawn into the Rosicrucianist occultism of societies such as the Golden Dawn and the Ordo Templi Orientis (OTO), which contrived to combine ill-digested snippets of oriental philosophy with the western European magical tradition.

Then, in 1919, the British physicist Ernest Rutherford announced that he had successfully achieved the transmutation of one element into another.

He had, in fact, changed nitrogen into oxygen. Admittedly, the amount of oxygen produced, some 20 parts per million, was minute, and the technique used, involving high-energy radiation, did not resemble in the slightest the procedures of the alchemists. But the experiment refuted the insistence of most scientists that transmutation was impossible, and all aspiring alchemists took heart.

It was in fact already known that transmutation took place in nature. The radioactive elements gradually 'decay', giving off radiation and producing further radioactive 'daughter' elements, which in turn decay. After a series of decays the end product, lead, is formed.

What Rutherford had done was to reverse the process. He had bombarded nitrogen gas with radiation consisting of fast-moving nuclei from the gas helium and had produced oxygen and hydrogen. The experiment can be expressed very simply in terms of atomic numbers (the chemical properties of each element are determined by its atomic number, which is the number of protons in its nucleus):

$$N(7) + He(2) = O(8) + H(1)$$

What every alchemist now asked himself was whether a similar kind of sum could be used

Opposite, top: the directors of the *Société Alchimique et Astrologique de France* in their laboratory in 1903. Despite the discoveries of 19th-century chemistry and physics, alchemy refused to die. The magazine that featured this picture said: 'To turn astrology into a true science, in which there is no room for fantasy – this is what they preach in their journal, *Rosa Alchemica*'

Opposite, below: the young Adolf Hitler (far left), with his patron, Erich Ludendorff. In association with Franz Tausend (centre), Ludendorff formed Company 164 to 'manufacture' gold. As a result they were able to divert 400,000 marks into Nazi Party funds. Tausend set up his gold-production laboratory at a quarry near Munich (right)

as a guide to the conversion of lead (82) into gold (79). Or perhaps another element might be a better starting point?

One of those who took renewed inspiration from the results of this experiment was a 36-year-old chemical worker in Munich, Franz Tausend. He had a theory about the structure of the elements that was a peculiar blend of the beliefs of Pythagoras, who had regarded the Universe as a combination of musical harmonies, and the discoveries of modern chemistry.

Tausend had published a pamphlet called *180 elements, their atomic weight, and their incorporation in a system of harmonic periods.* He believed that every atom had a frequency of vibration characteristic of that element, related to the weight of the atom's nucleus and to the grouping of electrons in orbital rings around it. Later research showed that this part, at least, of his theory was basically true. Tausend went on, however, to suggest that matter could be 'orchestrated': by adding the right substance to an element, it should be possible to change its vibration frequency into that of another element.

In 1924 Adolf Hitler was sent to prison for attempting to organise an armed uprising; one of his fellow conspirators, General Erich Ludendorff, was acquitted and in the following year stood for election as President of the German Republic. After being resoundingly defeated by the national hero Hindenburg, he turned his attention to raising funds for the infant Nazi Party. There were rumours in government circles that a certain Tausend had succeeded in making gold by transmutation, and Ludendorff got together a group of industrialists and businessmen to investigate the matter.

On Tausend's instructions one of the group, the merchant Stremmel, purchased the necessary materials – mainly iron oxide and quartz. They were melted together in a crucible, which Stremmel then took to his hotel bedroom for the night so that it could not be tampered with. In the morning, Tausend heated the crucible again in his electric furnace, in the presence of his visitors, and then added a small quantity of white powder to the molten mass. When the crucible had cooled it was broken open, and a gold nugget weighing a quarter of an ounce (7 grams) was found inside.

Financing the Nazis

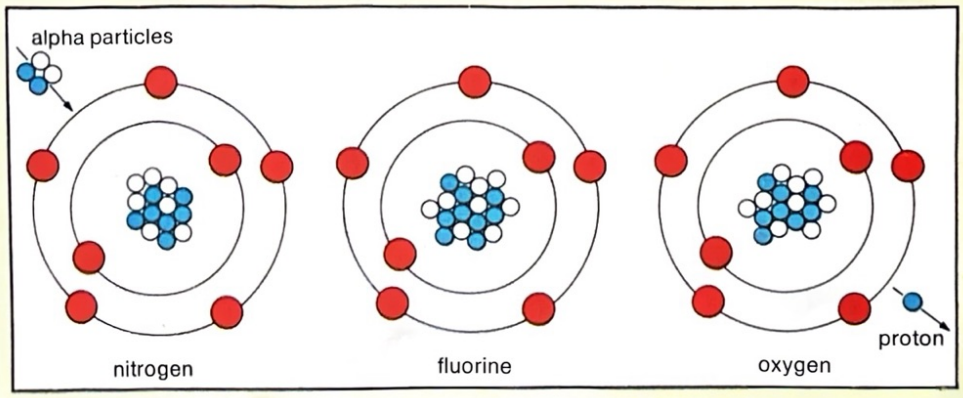
Ludendorff was overjoyed and immediately set about forming a company, which he called 'Company 164' – a number that, intriguingly, is twice the atomic number of lead. Ludendorff was to receive 75 per cent of the profits and Tausend 5 per cent. Investment money poured in and within a year the General had managed to divert some 400,000 marks into Nazi Party funds. Then, in December 1926, he resigned, leaving Tausend to handle all the debts. Nevertheless, Tausend contrived to continue raising money and on 16 June 1928 allegedly made 25 ounces (723 grams) of gold in a single

Atomic alchemy

Rutherford's work strengthened the conviction of orthodox scientists that the methods of the alchemists could never lead to the transmutation of elements. It was found that the atom has a central nucleus consisting of particles called protons, with positive electrical charge, and an equal or greater number of neutrons, lacking charge. Relatively light negatively charged electrons orbit the nucleus and fix the atom's chemical properties. The number of electrons is equal to the number of protons in the nucleus, so that the atom's positive and negative electrical charges balance.

So to change one element into another it is necessary to change the number of protons in the nucleus of each atom. The nucleus must be bombarded with fast-moving particles – either to force in additional protons or to disrupt the atom so that it loses protons. Today physicists use particles artificially accelerated by 'atom-smashing' machines. And they insist that chemical processes affect only the outer electrons, not the atom's deep interior.

Above: a modern particle-accelerating device



Left: Rutherford bombarded nitrogen atoms (seven protons, seven neutrons) with alpha particles (two protons bound to two neutrons), forming fluorine atoms (nine protons, nine neutrons). These lost a proton, forming a type of oxygen (eight protons, nine neutrons)

operation. On the strength of this he was able to issue a series of share certificates, each to the value of 22 pounds (10 kilograms) of gold.

But when, a year or so later, no more gold had been produced, Tausend was arrested for fraud; and on 5 February 1931, after a sensational trial, he was found guilty and sentenced to four years' imprisonment. While awaiting trial he had succeeded in producing gold under strict supervision in the Munich Mint – but the evidence was contested in court and did not save him.

The same fate was to befall a Polish engineer named Dunikovski who, in the same year that Tausend was convicted, announced in Paris that he had discovered a new kind of radiation – 'z-rays' – which would transmute quartz into gold. The mineral, spread on copper plates, was melted by an electric discharge at 110,000 volts, and was then irradiated with the z-rays.

The world was becoming accustomed to new types of radiation with remarkable properties. x-rays had been discovered a few decades before. Three kinds of radiation – alpha, beta and gamma – had been identified in the emissions from radioactive substances. Intense 'cosmic' radiations had been discovered bombarding the Earth from space.

Rays with miraculous properties were a staple of futuristic fiction. The public was ready to believe that gold-creating rays could exist – even if their nature was rather inadequately explained by Dunikovski. Investors poured some two million francs into his process.

But within a few months, when no gold was forthcoming, he also was tried and found guilty of fraud. After two years in prison his lawyer succeeded in obtaining his release, and Dunikovski went with his family to San Remo in Italy, where he resumed his experiments.

Soon there were rumours that he was supporting himself by the occasional sale of lumps of gold. His lawyer, accompanied by the eminent chemist Albert Bonn, set out for San Remo to see for himself.

It was found that the quartz being used by Dunikovski already contained minute amounts of gold; but whereas the usual methods of extraction produced gold in quantities of only 10 parts per million, Dunikovski's methods yielded almost one hundred times as much. Each experiment, however, involved only minute quantities of quartz, so the quantity of gold produced was very small.

In October 1936 Dunikovski demonstrated his process before an invited group of scientists. He was very secretive about his apparatus, but gave a theoretical explanation that is reminiscent of the primitive origins of alchemy. He proposed that all minerals contained 'embryonic atoms' undergoing a transformation that in nature took many thousands of years to complete. He claimed that his process merely accelerated the natural growth of embryonic gold in quartz.

Making gold from sand

The demonstration attracted considerable attention and an Anglo-French syndicate was formed, which was to bring sand from Africa and treat it in a big new laboratory on the south coast of England. But the Second World War broke out and little more was heard of Dunikovski. There were rumours that he had established a factory on the Swiss-French border, and there were stories that when the Germans occupied France they manufactured gold to bolster their failing economy – but there is no proof.

There have been, and still are, many more practitioners of alchemy in the 20th century. One was Archibald Cockren, who was killed when a bomb struck his tiny laboratory during the blitz on London. He was a respected osteopath who practised gold therapy. He began his investigations with the metal antimony, then turned his attention to iron, copper, silver, mercury and gold. Then:

> I entered upon a new course of experiment, with a metal . . .with which I had had no previous experience. This metal, after being reduced to its salts

Above: an engraving from the 17th-century alchemical work *Atalanta fugiens,* illustrating the ubiquitous nature of the Philosopher's Stone. It may be of significance that the form of the Stone shown here could represent crystals of salt or sand

Left: the Polish engineer Dunikovski, escorted by police officers, leaves the Paris polytechnic where he had been demonstrating his alchemical process while awaiting trial for fraud

Above right: wringing out canvas sheets that have been spread to collect the morning dew. This illustration is from the alchemical treatise called *Mutus liber*

Right: Armand Barbault followed the directions of *Mutus liber* in his 20th-century alchemical work

> and undergoing special preparation and distillation, delivered up the Mercury of the Philosophers, the Aqua Benedicta, the Aqua Coelestis, the Water of Paradise. The first intimation I had of this triumph was a violent hissing, jets of vapour pouring from the retort and into the receiver, like sharp bursts from a machine gun, and then a violent explosion, whilst a very potent and subtle odour filled the laboratory and its surroundings. . . .

Whatever Cockren's true achievement, nearly all his discoveries were lost in the bomb blast that killed him. A liquid that he called 'oil of gold' was used in later years, however, for medical purposes.

Postwar alchemy

Since the Second World War, much of the publicly known activity in alchemy has been centred in France. Apart from Eugène Canseliet, who claimed to have been a pupil of the master Fulcanelli, and who has been seen on television at work in his laboratory, there were others such as the writer Roger Caro and the painter Louis Cattiaux.

But undoubtedly the most notorious was Armand Barbault. An essential part of the Barbault process was the gathering of dew in canvas sheets every morning between 21 March and 24 June. This is not a new idea: it is shown in the wordless book of engravings known as the *Mutus liber* ('silent book'), and it is recommended by Salmon in his *Polygraphica*: 'If you are indeed an Artist, you may by this turn all metals into their first matter.' Barbault described his first matter as a 'germ', which grew in black earth.

It is time to ask whether there might be any truth in the tales of the alchemists. Did competent scientists such as van Helmont, Schweitzer and Boyle really witness the transmutation of a base metal into gold? Did Archibald Cockren isolate the ideal 'mercury' and 'sulphur' sought by the alchemists? And did Tausend and Dunikovski really succeed in producing gold from quartz?

Although the ancient alchemists could not possibly have had access to sources of energy sufficient to perform Rutherford's transmutation, perhaps they had some kind of intuitive understanding of what could happen. We wrote Rutherford's experiment as:

$$N(7) + He(2) = O(8) + H(1)$$

Now look at the three alchemical essentials postulated by Paracelsus: sulphur (symbol S, atomic number 16), mercury (symbol Hg, atomic number 80) and salt (sodium chloride, symbol NaCl – the atomic numbers of sodium and chlorine are 11 and 17, respectively). We can write a hypothetical reaction among these three as follows:

$$NaCl(28) + S(16) = NaS(27) + Cl(17)$$
$$NaS(27) + Hg(80) = Au(79) + NaCl(28)$$

Salt and sulphur are added together; chlorine gas is given off (to the alchemists this would simply have been 'air'); when mercury is added, the result is the original salt – and gold (Au).

The atomic numbers balance impressively. However, this is not the sort of reaction that ordinarily takes place in the chemical laboratory, where everything is either solid, liquid or gaseous. But there is a fourth state of matter, called plasma, in which atoms lose or gain electrons and can take part in chemical reactions that are impossible for them in their normal state. One of the easiest ways to produce a stream of plasma is to burn salt in the flame of the mundane Bunsen burner. Could this give a hint as to how the alchemists might have succeeded in bringing about 'impossible' reactions?

In our present state of knowledge, these are mere games with numbers. But they may bear further examination. Cockren began his research with antimony (Sb), but achieved his successes with 'a metal . . . with which I had had no previous experience.' He might have been referring to silicon (Si), which is not, in fact, a metal but a metalloid, belonging in a group of elements comprising carbon, germanium, tin and lead. It is the essential component of quartz, which is an almost pure compound of silicon and oxygen, silicon dioxide. We can easily write another 'Rutherford equation':

$$Si(14) + Si(14) + Sb(51) = Au(79)$$

A chance relationship among these atomic numbers? Or a guide to a possible gold-producing process involving silicon and antimony?

It seems improbable, despite the testimony that has accumulated over the centuries, that physical transmutation of a base metal into gold was ever achieved by any alchemist. But did those alchemists, striving to make themselves one with God, perhaps gain some intuitive understanding of the structure of matter? And when they described the Philosopher's Stone as 'the vilest and meanest of things . . . cast away and rejected by all', were they speaking of silicon dioxide – known to us as ordinary sand?

The man from nowhere

The self-styled Count St Germain – alchemist, diplomat and adventurer – led a shadowy career at the royal courts of 18th-century Europe. Some believe the enigmatic Count is still alive. Is there any truth in the rumour?

Towards the end of the year 1745 London was startled by the news that Louis XV of France had given his support to the Young Pretender, Prince Charles Edward Stuart, and would be providing him with an army to regain the British throne for his father. Although the Jacobite cause had been defeated at the battle of Culloden in April, it was feared that Jacobite plotters and their French supporters might incite further rebellion. Foreigners, particularly Frenchmen, were the prime suspects. One such man was arrested in November and accused of having been "sent over" to England by the French government. He was released after a few days, but his case caused a stir in high society. The Duchess of Kingston, for example, commented in a letter to her friend Lady Mary Wortley Montagu that the accusations had been "levelled at him and somewhat surprisingly he was believed and released".

Commenting on the case in a letter to Sir Horace Mann, dated 9 December, Horace Walpole wrote:

> The other day they seized an old man who goes by the name of Count Saint-Germain. He has been here these many years, and will not tell who he is or whence: but professes that he does not go by his right name. He sings and plays on the violin wonderfully well and is rich and never wants.

Walpole's comment sheds a tantalising and authentic light on one of the strangest characters of 18th-century high society – a man described by Count Clermont as "the completest charlatan, fool, rattle-pate, windbag and swindler" and by his last patron, Prince Charles of Hesse-Cassel, as "perhaps one of the greatest rogues who ever lived".

Dazzle of diamonds

The first of the many historical records of Count St Germain dates from about 1745, when he began to move in fashionable Viennese circles, a handsome man who appeared to be in his thirties. His clothes attracted attention in those days of brightly coloured silks and satins, for he habitually wore black, relieved only by crisp white linen at neck and wrists. The sombreness of his clothes, however, was brilliantly set off by a dazzle of diamonds on his fingers, his fob, his snuff box and his shoe buckles; according to later accounts he also carried handfuls of loose diamonds in his pockets in lieu of money.

In Vienna he met Countess Zabor and Lobkowitz, contemporary leaders of fashion, and through them the ailing French Marshal de Belle Isle, who had been taken seriously ill while campaigning in Germany. The nature of his illness is not recorded, but according to the Marshal it was Count St Germain who

Left, the only known portrait of the man who called himself the Count St Germain, an engraving made for the Marquise d'Urfé in 1783, when the Count must have been in his late sixties, and shortly before his reported death. St Germain was arrested in London as a spy some months after the defeat of the Scottish forces at Culloden in 1745 (below). He was accused of carrying letters for the Young Pretender Charles Edward Stuart (below left), but was soon released. He then returned to Paris, where he was introduced to Louis XV by Jeanne Antoinette de Pompadour, the king's mistress (right). Sent to the Hague by Louis, St Germain lost the friendship of Giacomo Casanova (below right), who has left us some of the most revealing descriptions of the Count

cured it, and in gratitude he took him to France and set him up with apartments and a well-equipped laboratory.

The bare bones of the Count's life after his arrival in Paris are well documented, but it is the long-vanished detail that provides the lasting mystery.

The legend begins shortly after the Count's arrival in Paris. One evening, according to the pseudonymous 'Countess de B. . .' in her memoirs, *Chroniques de l'oeil-de boeuf*, the Count had attended a soirée given by the aged Countess von Georgy, whose late husband had been Ambassador to Venice in the 1670s. Hearing the Count announced, the Countess said she recalled the name from her days in Venice. Had the Count's father perhaps been there at that time? No, replied the Count, but *he* had been, and well remembered the Countess as a beautiful young girl. Impossible, replied the Countess. The man she had known then was 45 at least, roughly the same age as he himself was now.

'Madame,' said the Count, smiling, 'I am very old.'

'But then you must be nearly 100 years old,' exclaimed the Countess.

'That is not impossible,' the Count replied and recounted some details that convinced the Countess, who exclaimed: 'I am already convinced. You are a most extraordinary man, a devil.'

'For pity's sake!' exclaimed the Count in a thundering voice. 'No such names!' He appeared to be seized with a cramp-like trembling in every limb, and left the room immediately.

Many such stories circulated – and were believed – in fashionable French circles during the days of the Count's early fame. He hinted, for instance, that he had known the Holy Family intimately, had been present at the marriage feast at Cana, and had 'always known that Christ would meet a bad end.' He had been particularly fond of Anne, the mother of the Virgin Mary, and had personally proposed her canonisation at the Council of Nicaea in AD 325.

In Paris the Count soon charmed the jaded Louis XV and his mistress, Madame de Pompadour. The truth about his two-year stay in England before his arrest in 1745 may never be known, but he could well have been engaged on a secret mission, on his return to France he carried out several delicate political errands for the King.

In 1760 Louis sent Count St Germain to the Hague as his own personal representative, ostensibly to arrange a loan with Austria to help finance the Seven Years' War against England. While in Holland, the Count fell out with his erstwhile friend Casanova, also a diplomat at the Hague, who tried hard but unsuccessfully to discredit him in public. But St Germain also made a more powerful enemy. The Duc de Choiseul, Louis's Foreign Minister, discovered that the Count had been putting out feelers with a view to arranging peace between England and France. Somehow the Duke convinced Louis that Count St Germain had betrayed him, and the Count was forced to flee, first back to England and then to Holland.

For two or three years he lived in Holland under the name Count Surmont and set about raising money to build laboratories in which he made paint and dyes and tried to perfect the techniques of alchemy, 'the ennoblement of metals'. He seems to have been successful, for records show that he disappeared from Holland with 100,000 guilders – only to turn up in Belgium, this time calling himself the Marquis de Monferrat. Here, in Tournai, he set up another laboratory before vanishing again.

Over the next few years reports of the

Count's activities continued to come from various parts of Europe. In 1768 he appeared in Russia at the court of Catherine the Great. Turkey had just declared war on Russia, and it seems that his powers as a diplomat and as an insider in French politics stood him in good stead, for before long he was advising Count Alexei Orlov, head of the Russian Imperial Forces. As a reward he was made a high-ranking officer in the Russian Army, this time choosing an ironic English alias – General Welldone. At this point he could have settled down in Russia to lead an honoured and profitable life, but after the defeat of the Turks at the battle of Chesmé in 1770 he chose to go travelling again.

In 1774 he turned up in Nuremberg, seeking funds from Charles Alexander, Margrave of Brandenburg, to set up another laboratory. This time he claimed to be Prince Rákóczy, one of three brothers from Transylvania. At first the Margrave was impressed, particularly when Count Orlov visited Nuremberg on a state visit and embraced the

'Prince' warmly. But on checking, the Margrave found that all three Rákóczys were indubitably dead, and that the 'Prince' was in fact Count St Germain. The Count made no attempt to deny these charges, but felt it prudent to move on, and did so in 1776.

The Duc de Choiseul claimed that St Germain had worked as a double agent for Frederick the Great during his period at the French court. If this were so, his old master preferred to forget the connection, for a letter from Count St Germain to Frederick begging for patronage was ignored. Undaunted, the Count went to Leipzig and presented himself before Prince Frederick Augustus of Brunswick, claiming to be a Freemason of the fourth grade.

This was a bold move, for Frederick Augustus was Grand Master of the Prussian Masonic Lodges – and, unaccountably, it was a move that went wrong. If he was a confidence trickster, Count St Germain in his prime had few equals at the game; his background stories generally stood up to close scrutiny. This time, however, they were lame. The Prince declared he was not a Mason, while the Count feebly replied that he was, but had forgotten all the secret signs.

In 1779 Count St Germain came to his last known resting place, at Eckenförde in Schleswig, Germany. He was an old man, probably in his late sixties, although typically he claimed to be much older. Some of his surface charm had gone, and at first he failed to make much impression on Prince Charles of Hesse-Cassel – but soon, like his predecessors, the Prince was won over.

By this time St Germain, who by all accounts had previously paid at least lip service to the Catholic Church, was openly mystical in his thinking. He told Prince Charles:

> Be the torch of the world. If your light is that only of a planet, you will be as nothing in the sight of God. I reserve for you a splendour, of which the solar glory is a shadow. You shall guide the course of the stars, and those who rule Empires shall be guided by you.

The parish records show that on 27 February 1784 Count St Germain died at Prince Charles's home on Eckenförde. He was buried locally, and his last patron erected a tombstone bearing the words:

> He who called himself the Comte de Saint-Germain and Welldone of whom there is no other information, has been buried in this church.

But was the Count dead? There is evidence that he appeared to a number of people over the years from 1784 to 1820; some occultists believe he is still alive. The mystery has lived on and deepened in the two centuries since his supposed death.

Following his exile from France, Count St Germain went to the court of Catherine the Great of Russia (top), where he soon achieved high standing as a diplomat and took the title of 'General Welldone'. Towards the end of his career he began to claim that he was a high-ranking Freemason. The illustration (above) shows the ceremony of the entered Apprentice, the first degree of masonry, in the 'Scottish' rite, in a Paris lodge during the 1740s. Laid on the floor is a 'tracing board', used to instruct the new member in the symbolism of masonry

Right: Prince Charles of Hesse-Cassel, the Count's last patron, in whose castle he died

Searching for St Germain

Fluent linguist, 'wonderful' musician and painter, gifted jeweller, healer – the talents of the Count St Germain seemed endless. The adventurer's remarkable career continues into the last half of the 20th century

THE MYSTERY surrounding the Count St Germain is deepened by the genuine uncertainty about his origins, which remains today. One account states that he was born in 1710 in San Germano, the son of a tax collector. Eliphas Levi, the 19th century occultist, claimed that St Germain was born in Lentmeritz in Bohemia, the bastard son of a noble Rosicrucian, at the end of the 17th century. The date fits, and the background would account for the Count's strong leaning towards mysticism as well as his formidable talents – even if they were not 'powers' in the paranormal sense of the word.

He had, for instance, a genuine gift for languages; it is known that he spoke fluent French, German, English, Dutch and Russian, and he claimed that he was also a master of Chinese, Hindu and Persian – although there can have been few people around with sufficient knowledge of these languages to challenge him.

Horace Walpole wrote that the Count was a 'wonderful' musician. He was also a 'wonderful' painter – although none of his canvases are known to have survived. The uniqueness of his oils seems to have lain in the fact that he could reproduce jewels which 'glittered . . . as in the life'.

There is plenty of evidence that St Germain was an expert jeweller – although not, as he claimed, that he had studied the art with the Shah of Persia. He is reported to have delighted Louis XV by repairing a flawed diamond and it may well be that he decorated his famous jewel paintings with mother-of-pearl or some such substance.

He also had an excellent knowledge of chemistry in all its branches; the many laboratories that he set up with borrowed money throughout Europe were all apparently devoted to the production of brighter and better pigments and dyes, as well as to the study of the ennoblement of metals – alchemy.

St Germain also had a reputation as a healer; besides curing the Marshal de Belle Isle, he revived a young friend of Madame de Pompadour after mushroom poisoning had almost killed her.

The Count was reputed never to eat in company – he sat and sipped mineral water

Above: . . . intended by nature to be the king of impostors', as Casanova described him, Count St Germain claimed to know all the secrets of alchemy, including the nature of the Elixir of Life. He set up numerous laboratories in different countries in Europe; they would have looked very like this alchemist's laboratory portrayed by Pietro Longhi

Below: St Germain claimed to have studied the art of jewellery at the court of the Shah of Persia, where he is said to have lived from 1737 to 1742. The many fantastic claims made by the Count, and the persistent stories that he was alive well into the 19th century, caused Napoleon III (below right) to set up a special commission to enquire into the matter. The findings of the commission were, however, completely destroyed in a fire at the Hôtel de Ville, Paris, in 1871 (below, far right), an event that the supporters of the Count's story maintained was not an accident

while everyone around him was gorging in the self-indulgent manner of the time. This can only have added to his air of mystery. Casanova was certainly impressed:

> Instead of eating, he talked from the beginning of the meal to the end, and I followed his example in one respect as I did not eat, but listened to him with the greatest attention. It may safely be said that as a conversationalist he was unequalled.

In fact, as Colin Wilson points out in *The occult*, the Count was probably simply a vegetarian.

The real remaining mystery surrounding the legend of St Germain lies in the question of where he gained all his specialised knowledge. Again there is a simple answer: experience. The Count's 19th-century followers insisted that the knowledge was his when he first appeared at the French court in the 1740s, but it is more likely that he amassed it during his long life; after all, he lived at least into his seventies.

Not all of St Germain's contemporaries were impressed by his talents. Casanova, who met him in the Hague when they were both on diplomatic missions there, regarded him as a charlatan, but nevertheless found him charming:

> This extraordinary man, intended by nature to be the king of impostors and quacks, would say in an easy, assured manner that he was three hundred years old, that he knew the secret of the Universal Medicine, that he possessed a mastery over nature, that he could melt diamonds, professing himself capable of forming, out of 10 or 12 small diamonds, one of the finest water . . . All this, he said, was a mere trifle to him. Notwithstanding his boastings, his bare-faced lies, and his manifold eccentricities, I cannot say I found him offensive. In spite of my knowledge of what he was and in spite of my own feelings, I thought him an astonishing man . . .

And in 1777 Count Alvensleben, Prussian Ambassador to the Court at Dresden, who knew St Germain well, wrote of him:

> He is a highly gifted man with a very alert mind, but completely without judgement, and he has only gained his singular reputation by the lowest and basest flattery of which a man is capable, as well as by his outstanding eloquence, especially if one lets oneself be carried away by the fervour and enthusiasm with which he can express himself. Inordinate vanity is the mainspring driving his whole mechanism.

Many of the stories about St Germain that gave rise to these sceptical attitudes did not actually stem from the Count himself but, as was revealed by the researches of Gustav Berthold Volz in the 1920s, from the mouth of an impostor named Gauve. Gauve was

Left Louis XVI says farewell to his family, as the gaoler waits to lead him to the guillotine. In her diaries the Queen, Marie-Antoinette, regretted that she had not paid heed to St Germain's warnings

Below left the famous French singer Emma Calvé autographed this photograph in 1897 to St Germain, 'the great chiromancer, who has told me many truths'

Below right Richard Chanfray, a Parisian claiming to be Count St Germain, photographed in 1976

employed by St Germain's arch-enemy, the Duc de Choiseul, who, in his jealousy of the Count, would stop at nothing in his attempts to discredit him. The idea was that Gauve, who looked remarkably like the Count, should wander around society exaggerating the Count's known foibles to discredit him

Not everyone believes that the Count is dead. Although the parish records at Eckenförde record his death, the legend that he was still alive began almost immediately afterwards. The Count's last patron, Prince Charles of Hesse-Cassel, added to the mystery surrounding his death by burning all his papers 'lest they be misinterpreted', while another of his followers from Hesse broadcast the news that he was not dead, but had appeared in Paris and foretold the outbreak of the French Revolution to Marie Antoinette – who, in her diaries, regretted not having taken note of what he said earlier. He made another appearance, witnessed by many people, at Wilhelmsbad in 1785, a year after his supposed death – accompanied, so it was said, by the magician Cagliostro, the hypnotist Anton Mesmer, and the 'unknown philosopher', Louis Claude de St Martin.

In 1789 he went to Sweden to warn King Gustavus III of danger, and visited his friend, the diarist Mademoiselle d'Adhémar – who noted that he still looked like a man of 46 – and told her that he would see her five times more. She claimed that this did, indeed, happen – 'always to my unspeakable surprise' – the last occasion being the night before the Duc de Berri's murder in 1820.

The legend lives on

The Emperor Napoleon III (1808–1873) was so intrigued by the story that he ordered a special commission to be set up to investigate the life and doings of the enigmatic Count. The commission's findings were destroyed in a disastrous fire that consumed the Hôtel de Ville in Paris in 1871 – an event that the Count's followers found impossible to ascribe to coincidence.

A few years later Madame Blavatsky's Theosophical Society announced that St Germain was one of its 'hidden masters' – immortals whose stores of secret knowledge were available to adepts for the enrichment of the world – along with such figures as Christ, Buddha, Apollonius of Tyana, Christian Rosencreutz and Francis Bacon. It is said that a group of theosophists went to Paris after its liberation from the Nazis, convinced they would meet the Count; apparently he failed to turn up.

Nevertheless, the legend of this enigmatic figure lives on. As recently as January 1972 a Parisian called Richard Chanfray appeared on French television claiming to be the Count St Germain. In front of the TV cameras, using a camping gas stove, he apparently successfully turned lead into gold. Will the Count appear again? Time only deepens the mystery of his true nature.

The hidden face of Fulcanelli

One of the strangest stories to have emerged from the cloud of mystery that surrounds the ancient science of alchemy is that of the modern master Fulcanelli. We know tantalisingly little about this extraordinary man, yet interest in him grows

THE NAME FULCANELLI has flickered tantalisingly in and out of modern occult literature and speculation for more than half a century. Yet the identity of the 20th-century alchemist behind the pseudonym remains a complete mystery.

Today, Fulcanelli has taken on the aura almost of an alchemical 'saint' – an ageless adept of our own times, as enigmatic and fascinating as the semi-legendary Comte de St Germain.

It was in the early 1920s that the Fulcanelli legend started: Parisian occultists and alchemists began overhearing oblique and intriguing references to an actual master, alive and working secretly in their midst. These came mainly from Eugène Canseliet, an intense, slightly-built man in his early twenties who was known to be an enthusiastic researcher into alchemy. They were also bandied about by his constant companion and friend, an impoverished artist and illustrator, Jean-Julien Champagne, who was 22 years Canseliet's senior. The pair, who rented adjacent quarters on the sixth storey of a dilapidated tenement at 59 bis, rue de Rochechouart, in the Butte-Montmartre district, quickly became the focal point of a small, select circle of occultists. They were frequently seen in the city's great libraries, the Arsenal, the Sainte Geneviève, the Mazarin and the Bibliothèque Nationale, poring over rare books and manuscripts.

Those on the periphery of this informal study-group heard hints that 'the Master, Fulcanelli' was elderly, distinguished, rich, immensely learned and possibly even of aristocratic or noble lineage. He was a genuine, practising alchemist who, if he had not done so already, was on the brink of perfecting the Great Work – the manufacture of the Philosopher's Stone, which would ennoble base metals to perfection by transmutation, and the Elixir, which could prolong life indefinitely.

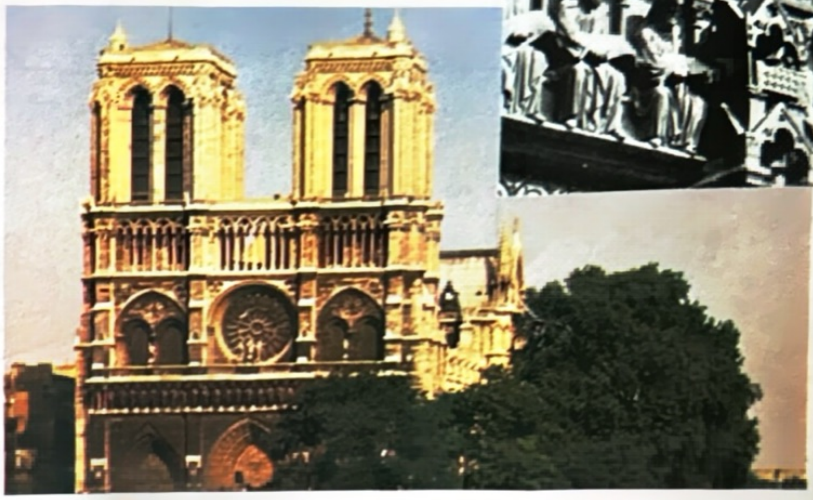
But who the Master really was remained a mystery. Few had apparently actually met him – except, so they claimed, Champagne and Canseliet. Sceptics began to question the fact of his existence.

Then, in the autumn of 1926, evidence of the Master's reality – or at least the reality of someone – appeared. It came in the form of a remarkable book, *Le mystère des cathédrales*

The mystery of the cathedrals

In his book *Le mystère des cathédrales* Fulcanelli takes the reader on a guided and interpretative tour of many of France's finest examples of Gothic architecture, including the Cathedral of Notre Dame in Paris (below). Like many mystical commentators before him, he sees architecture as a means of passing on esoteric knowledge, encoded in the form and proportion of the building, its sculpture and stained glass.

His enthusiasm for Gothic architecture is reached via a circuitous route



('The mystery of the cathedrals'), published in a limited luxury edition of only 300 copies, by Jean Schemit, of 45 rue Lafitte, in the Opéra district. It was subtitled 'An esoteric

involving a kind of punning logic. He interprets gothic art, *art gothique*, as *argot*-hique – and, he says, *argot* (cant or slang) is defined in dictionaries as 'a language peculiar to all individuals who wish to communicate their thoughts without being understood by outsiders.' And he claims that those who use this secret language are descendants of the sailors who accompanied Jason on his search for the Golden Fleece – aboard the ship *Argo*; they, he claims, 'spoke the *langue argotique* [language of the Argo] . . . while they were sailing towards the felicitous shores of Colchos . . .'

How does Fulcanelli's method work in practice? In the Portal of the Virgin of Notre Dame Cathedral (left), he sees the medallions of the sarcophagus as symbols of the seven planetary metals. (In the standard alchemical interpretation, the Sun stands for gold, Mercury for quicksilver, Saturn for lead, Venus for copper, the Moon for silver, Jupiter for tin and Mars for iron.) Taken as a whole, Fulcanelli claims, the portal gives clues as to how to transmute these metals. But Fulcanelli has not made matters too easy; the final step in interpretation is left to the alchemist. Perhaps this is just as well – for, as Fulcanelli's pupil Canseliet reveals in his introduction to the book, the '*key to the major arcanum* is given quite openly in one of the figures.'

The Greek Sun-god Helios in his chariot, in a detail from a vase, and the Roman fire-god Vulcan, in a relief found at the Roman camp of Corstopitum in Northumbria. 'Fulcanelli' is a phonetic approximation of 'Vulcan' and 'Helios' – an allusion, perhaps, to the flames used to heat the mysterious substances that combine to form the Elixir of Life

Opposite page: this bracket in the mansion of Lallement in Bourges shows a medieval adept holding the Vessel of the Great Work, in which the Elixir of Life is prepared

Above left: 59 bis, rue de Rochechouart, Paris. In this house lived Eugène Canseliet and Jean-Julien Champagne, reputedly pupils of the mysterious Fulcanelli

Below: Marguerite de France (1553–1615), who perhaps knew the secret of the Great Work. Rumour suggested Fulcanelli might be descended from her

interpretation of the hermetic symbols of the Great Work'. Its preface was by Eugène Canseliet, then aged only 26, and it contained 36 illustrations, two in colour, by the artist Champagne. The text itself was ascribed simply to Fulcanelli.

It purported to interpret the symbolism of various Gothic cathedrals and other buildings in Europe as encoded instructions of alchemical secrets, a concept only darkly hinted at by previous writers on the esoteric in art and architecture. Among occultists, it caused a minor sensation.

But even in his original preface, the young Canseliet intimated that his Master, Fulcanelli – the name is a phonetic approximation of Vulcan, the blacksmith god, and Helios, the sun-charioteer – had attained the Stone, become mystically transfigured and illuminated, and had disappeared.

> He disappeared when the fatal hour struck, when the Sign was accomplished. . . . Fulcanelli is no more. But we have at least this consolation that his thought remains, warm and vital, enshrined for ever in these pages.

Perhaps understandably – especially in view of the immense scholarship and unique haunting qualities of the book – speculation about Fulcanelli's true identity ran wild within the occult fraternity.

There were suggestions that he was a surviving member of the former French royal family, the Valois. Although they were supposed to have died out in 1589 upon the demise of Henri III, it was known that members of the family had dabbled in magic and mysticism and that Marguerite de France, daughter of Henri II and wife of Henri IV of Navarre, survived until 1615. What is more, one of her many lovers was the esoterically inclined Francis Bacon (whom many still claim as an adept to this day); she was divorced in 1599 and her personal crest bore the magical pentagram, each of whose five points carried one letter of the Latin word *salus* – meaning 'health'. Could the reputedly aristocratic Fulcanelli be a descendant of the Valois, and did the Latin motto

hint that some important alchemical secret of longevity had been passed on to him by the family? It was, at least, one possibility.

There were other, more or less plausible identifications. Some claimed Fulcanelli was a bookseller-occultist, Pierre Dujols, who with his wife ran a shop in the rue de Rennes in the Luxembourg district of Paris. But Dujols was already known to have been only a speculative alchemist, writing under the nom de plume of Magophon. Why should he hide behind two aliases? Another suggestion was that Fulcanelli was the writer J.H. Rosny the elder. Yet his life was too well-known to the public for this theory to find acceptance.

There were also at least three practical alchemists working in the city around the same period. They operated under the respective pseudonymns of Auriger, Faugerons and Dr Jaubert. The argument against them being Fulcanelli was much the same as that against Dujols-Magophon: why use more than one alias?

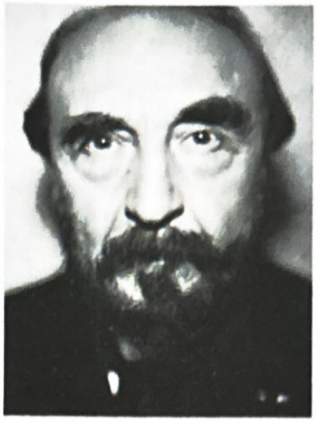
Finally, there were Eugène Canseliet and Jean-Julien Champagne, both of whom were directly connected with Fulcanelli's book, and both of whom had claimed to have known the Master personally.

The argument against Canseliet's identification as the Master was fairly straightforward: he was far too young to have acquired the erudition and knowledge so obviously and remarkably demonstrated by the text of *Le mystère des cathédrales*. And a study of his preface showed a distinct difference in style from that of the text, a difference that remains notable in Canseliet's more recent writings.

Champagne, meanwhile, seemed to some the more likely contender. He was older and more experienced, and his work as an artist

Left: Jean-Julien Champagne, artist and illustrator, and constant companion of Fulcanelli's pupil Eugène Canseliet. Champagne was a braggart and a practical joker, and his habit of trying to pass himself off as Fulcanelli added to the confusion about the true identity of the master alchemist

Above: Eugène Canseliet, pupil of Fulcanelli, who continues to keep the secret of the master alchemist's identity



Above: the writer J. H. Rosny the elder (1856–1940) who, many people suspected, was the figure behind the pseudonym 'Fulcanelli'

could have taken him around the various cathedrals, châteaux and other curious monuments whose symbolism Fulcanelli had obviously studied and interpreted in great detail as keys to the Great Work.

On the other hand, Champagne was a noted braggart, practical joker, punster and drunkard, who frequently liked to pass himself off as Fulcanelli – although his behaviour was entirely out of keeping with the traditional solemn oath of the adept to remain anonymous and let his written work speak for itself.

A vain and dangerous quest

Two examples of Champagne's wicked sense of humour suffice to show the great gap between his own way of thinking and that of the noble-minded author of *Le mystère des cathédrales*. Champagne once persuaded a gullible young follower that he should stock up a massive supply of coal to ensure that his alchemical furnace was kept constantly burning at the required temperature. The naïve youth lugged sack after sack of the fuel up to his garret until there was barely room in which to lie down and sleep. Champagne then announced to the would-be alchemist that the quest was an utterly vain and dangerous one – leaving him almost banished from his apartment by coal and, presumably, considerably out of pocket into the bargain.

The other carefully contrived prank of Champagne involved his forging a letter, purportedly from Monsieur Paul le Cour, who edited and published a periodical called *Atlantis*, to the publisher of the *Mercure de France*. In it, the fake le Cour urged the setting up of a fund by the *Mercure's* subscribers to build a monument for the victims of the fabled lost continent – a cenotaph that, since he suggested it be placed in the Sargasso Sea, would have to be unsinkable. Champagne sat back and laughed while the unsuspecting 'real' le Cour received an indignant volley from the *Mercure* publisher.

To crown all of this, Champagne's huge

appetite for absinthe and Pernod finally killed him. He died in 1932 of gangrene in his sixth-floor garret. His friend Canseliet nursed him through his long, painful and particularly unpleasant illness (Champagne's toes actually fell off). The poor artist was aged only 55.

Only three years earlier, a second work by the mysterious Fulcanelli had been published, again by Jean Schemit. It was *Les demeures philosophales* ('The dwellings of the philosophers'), which was in two volumes and double the length of the first book. Like its predecessor, it interpreted particular architectural embellishments, such as ornate ceiling panels – this time in 12th- to 15th-century mansions and châteaux – as encoded alchemical knowledge.

The appearance of this book inspired yet another theory about Fulcanelli's possible identity. Inside the rear cover of the second volume were the armorial bearings of Dom Robert Jollivet, a 13th-century abbot of Mont-St-Michel, known to have dabbled in alchemy. This, according to the theory, implied that the name of Jollivet was intended to indicate that his modern near-namesake, F. Jolivet Castelot, was in fact Fulcanelli. Jolivet Castelot was President of the Alchemists' Society of France from around 1914 and was a member of the Ordre Kabbalistique de la Rose-Croix. Between 1896 and 1935, he had published many studies in hermeticism, alchemy and spagyrics – the art of making chemical/medical preparations using alchemical principles. But he made no secret of the fact that he was an 'archimist' rather than an alchemist – that is, a researcher who tried to effect transmutation by orthodox chemistry, rather than a more mystically inclined alchemist.

Below: F. Jolivet Castelot, a practising 'archimist' – someone who tries to use ordinary chemical methods to transmute base metals into gold – and yet another Fulcanelli-suspect

There was, however, an even stranger heraldic shield on the final page of the original edition of *Le mystère des cathédrales*.

The occult scholar Robert Ambelain who, in the 1930s, made one of the most thorough investigations into the Fulcanelli mystery was the first to draw attention to this shield. Among many other alleged clues, Ambelain pointed out that the dog-Latin motto beneath the shield was *uber campa agna*, which was a phonetic approximation of Hubert Champagne. And, he claimed, Hubert was the middle name of the artist, Jean-Julien Champagne. He also noted that the pseudonym Fulcanelli is an anagram of *l'écu finale* ('the final shield'), thus indirectly indicating the heraldic device and its motto.

Eugène Canseliet, however, has flatly denied the identification of Champagne as Fulcanelli – or of anyone else, for that matter – consistently since 1926. Hubert was not the artist's middle name, he claims – although it is, by sheer coincidence, that of his own maternal grandfather. In any case, he further asserts, the damning shield was inserted into the first edition of the book by Champagne – without the permission or knowledge of the Master, Fulcanelli, or of himself – another practical joke!

Is this inscription on the grave of Jean-Julien Champagne, containing clues pointing to Fulcanelli, merely a last attempt to convince people he was the mysterious alchemist?

Deceptions and forgeries

Canseliet, who is Fulcanelli's sole surviving pupil and official literary executor, similarly claims that an inscription on Champagne's gravestone, along with a deliberate forgery of Fulcanelli's signature by the artist, were further attempts to deceive or mislead. The gravestone epitaph, at the cemetery of Arnouvilles-les-Gonesses, reads:

Here rests Jean-Julien Champagne
Apostolicus Hermeticae Scientiae
1877–1932

The alleged Fulcanelli signature, meanwhile, appeared in a handwritten dedication of the original edition of *Le mystère des cathédrales*, given by Champagne to an occultist named Jules Boucher. It was signed A.H.S. Fulcanelli – the same initials as those of the Latin motto on the gravestone. And in Jules Boucher's *Manual of magic*, the author's dedication is to 'my master Fulcanelli'.

Curiously enough, despite all his alleged evidence to the contrary, Ambelain reaches the conclusion that Champagne did actually achieve the Philosopher's Stone – the stone that transmutes base metals into gold and allows the manufacture of the Elixir of Life – some three years before his death.

But if Ambelain is correct, how could this explain Champagne's untimely and less than dignified death through over-indulgence in drink at the age of 55? Quite simply, it doesn't make sense.

And yet, more than one person has attested to Fulcanelli's success in transmutation and to his continued existence – even in the 1980s – which would make him more than 130 years old!

The 'alchemical fireplace' (below), now in the Château de Terre Neuve (left) in Vendée. In *Les demeures philosophales*, Fulcanelli translates the Latin motto *nascendo quotidie morimur* inscribed above the fireplace as 'by being born, we die daily', and points out that this alludes to certain aspects of the alchemical process as well as the spiritual changes they allegedly induce

Transformation of an alchemist

At their final meeting in 1954, Canseliet reported that his master Fulcanelli seemed youthful – although he must have been over 100 years old. Had he found the secret of eternal life?

IN FRANCE THE NAME of Fulcanelli quickly found popular acceptance as the traditional pseudonym of an alchemical Master. Go to the 16th-century Château de Terre-Neuve, Vendée, even today, and there you will be shown an ornately decorated 'alchemical fireplace' – and the French guide will tell you it is the one of which Fulcanelli wrote in *Les demeures philosophales*, without even bothering to explain who Fulcanelli was . . . or is.

But to English-speaking students of occultism and alchemy, it was not until 1963 that the publication of Louis Pauwels's and Jacques Bergier's best-seller *The dawn of magic* in English ensured that Fulcanelli and his works came to be more widely known. And it was a further eight years before Fulcanelli's first masterpiece, *Le mystère des cathédrales*, was translated into English.

Each of these books provided astounding new information about Fulcanelli. The latter, for example, contained the bold assertion by Fulcanelli's disciple Eugène Canseliet that the Master had given him a minute quantity of the alchemical 'powder of projection' in 1922 – and permitted him to transmute 4 ounces (100 grams) of lead into gold. The experiment, Canseliet told Walter Lang, who wrote the book's introduction, took place in the unlikely setting of a gasworks at Sarcelles before two witnesses: the artist Jean-Julien Champagne and a young chemist named Gaston Sauvage.

Below: the noted French atomic physicist André Helbronner. In 1937 his research assistant Jacques Bergier was warned of the implications of manipulating nuclear energy by a mysterious stranger – whom he identified as Fulcanelli

Furthermore, in a letter to Lang, Canseliet maintained that, when he had last worked with Fulcanelli, 'The Master was already a very old man but he carried his eighty years lightly. Thirty years later, I was to see him again . . . and he appeared to be a man of fifty. That is to say, he appeared to be no older than I was myself.'

Canseliet (who was born in 1901) has subsequently asserted that he has, on more than one occasion, kept a secret rendezvous with his Master – and that Fulcanelli is still very much alive.

Another possible appearance of the Master was reported by Pauwels and Bergier in their book. Bergier claimed that in June 1937 – eight years before the first atom-bomb test in New Mexico – he was approached by an impressive but mysterious stranger. The man asked Bergier to pass on a message to the noted physicist André Helbronner, for whom he was then working. He said he felt it his duty to warn orthodox scientists, now

Louis Pauwels (right) and Jacques Bergier (far right), whose best-selling *The dawn of magic*, published in 1963, brought the first news of Fulcanelli to English-speaking readers

that they were on the brink of being able to manipulate nuclear energy, of the danger of this new discovery. The alchemists of bygone times – and previous civilisations that had destroyed themselves – had obtained such secret knowledge. The stranger said he held out no hope that his warning would be heeded, but nonetheless felt obliged to issue it. Bergier remained convinced, right up to his death in November 1978, that the enigmatic stranger was Fulcanelli.

As a result of Bergier's experience, the American Office for Strategic Services, forerunner of the CIA, made a search for Fulcanelli when the Second World War ended in 1945. They were anxious to round up anyone who had prior knowledge of nuclear physics, to prevent their defection to hostile powers. But Fulcanelli could not be found.

Alchemy and the atom bomb

There is, however, one flaw in Bergier's story. According to his own account, the man who visited him, while speaking apparently knowledgeably about the manipulation of nuclear energy, mentioned the element plutonium. Yet this element was not isolated until February 1941, by the physicist Glenn T. Seaborg, at Berkeley, California. Furthermore, it was not actually *named* plutonium until March 1942 – five years after Bergier's alleged encounter. In fact, Element 94, as it was previously called, was almost dubbed 'plutium' – but Seaborg, as its discoverer, decided plutonium rolled more easily off the tongue.

But the fact remains that Bergier claimed that *someone* highly knowledgeable visited him at the Paris Gas Board laboratory in 1937. And he was said to have a photographic memory.

There is one further account that tells of a transmutation performed by Fulcanelli himself. It comes from a modern alchemist, now

Glenn T. Seaborg, who discovered the element plutonium in 1941. Bergier claimed that the stranger who visited him in 1937 mentioned plutonium by name – and yet this event occurred four years before the element was isolated, and five years before it was actually called plutonium

operating from Salt Lake City, Utah. He is Frater Albertus Spagyricus, born Albert Riedel in Dresden, Germany, in 1911. A former interior decorator, Frater Albertus now heads the flourishing Paracelsus College (Utah Institute of Parachemistry), formed originally as the Paracelsus Research Society in 1960. The college operates regular seminars on alchemical subjects at its headquarters and seeks to 'bring alchemy out of the Dark Ages'.

In his book *The alchemist of the Rocky Mountains* (1975), Frater Albertus claims that Fulcanelli transmuted half a pound (200 grams) of lead into gold and 4 ounces (100 grams) of silver into uranium in 1937 – the same year, it will be noted, as Bergier's meeting with the mysterious stranger. The experiment, according to Albertus, took place at the Castel de Leré, near Bourges, and was witnessed by the castle's owner, Pierre de Lesseps, along with two unnamed physicists, a chemist and geologist.

When Fulcanelli added an 'unknown substance' to the half-pound of molten lead, says Albertus, it was transmuted into the same weight in gold. Afterwards, Fulcanelli did the same with the silver, producing a like amount of uranium.

Asked what the unknown substance was, Fulcanelli 'would only mention offhandedly that it was derived from ferrous pyrite (fool's gold), a ferrous sulphide FeS_2.'

The present author wrote to Frater Albertus asking for his sources of information. But an assistant politely answered that Frater Albertus was unfortunately too busy teaching and attending to his lecture programme to be able to answer personally and in detail.

According to Frater Albertus, however, it was after the 1937 transmutation that Fulcanelli disappeared.

The only other person who has claimed to have contacted Fulcanelli in more recent

The perfect being

The aim of alchemists in attempting to complete the Great Work is not merely to enable them to change base metals into gold, or even to achieve eternal youth. For alchemists believe that every stage in the alchemical process is accompanied by a spiritual change in the person conducting the work.

The secret of the alchemical art is said to be contained in the aphoristic principle solve et coagula, 'dissolve and combine'. This is a fair description of the physical aspect of the alchemical process: at each stage, the various characteristics of a substance are stripped away, and a new, nobler substance is built up. In the spiritual aspect, this means a 'death' followed by a 'rebirth' into a better, purer life – a concept familiar in many religions; St Paul, for instance, exhorts the faithful to 'die to sin and live to righteousness'.

In the final stage of the Great Work, 'the King is reunited in the Fire of Love with his blessed Queen' – and the Alchemist becomes the perfect being, the Divine Androgyne, the perfect conjunction of man and woman.

times is his faithful pupil Canseliet. He has asserted that he met his Master in Spain in 1954 in highly unusual circumstances.

If Fulcanelli was, as Canseliet maintains, 80 when last they worked together in the late 1920s, it would make the Master Alchemist between 100 and 110 years old by the time of the Spanish meeting. Confirmation that Canseliet did indeed go to Spain that year was obtained by the late Gerard Heym, founder member of the Society for the Study of Alchemy and Early Chemistry and editor of *Ambix*, its journal. Heym, who was acclaimed by many as Europe's foremost occult scholar of his day, made friends with Canseliet's daughter and through her managed to take a look at his passport. It carried a Spanish entry-visa stamp for 1954.

But how Canseliet received the summons to Spain and what actually went on there is highly mysterious. Heym told the occultist Walter Lang that he gained the impression that a message was received in some paranormal way, possibly through clairvoyance. And a close friend of Canseliet, who was still engaged in alchemical research in 1981 and must remain anonymous, told the present writer: 'He has told me in detail how he met Fulcanelli in Spain – in another dimension, as it were, or rather at a point where such meetings are possible.'

Further enquiries elicited the information that Canseliet went to Seville and was met and taken by a long, circuitous route to a large mountain château. It turned out to be a secret colony of alchemists – and it was here that Canseliet had once again met his former Master in such mysterious circumstances.

Frater Albertus Spagyricus, director of Paracelsus College, the Utah Institute of Parachemistry. He claims that in 1937, before three witnesses, Fulcanelli performed transmutations of lead into gold, and silver into uranium

But, even more peculiar to those not familiar with alchemical philosophy and its aura of mysticism, Fulcanelli appeared to have undergone a curious form of transformation. He seemed androgynous – to have characteristics of both men and women.

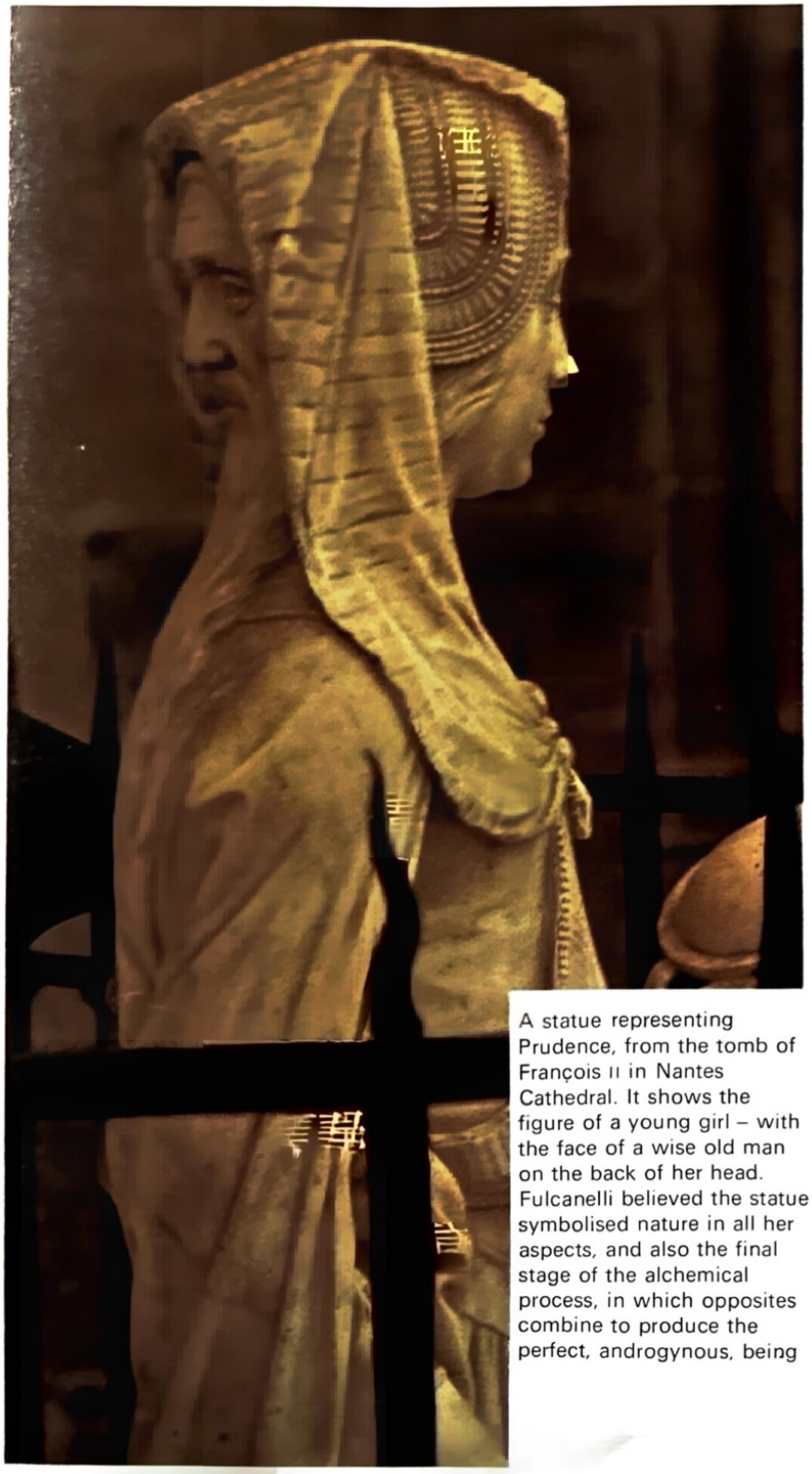
Canseliet has told sources close to him – he does not receive casual visitors and cannot deal with his massive mail – that Fulcanelli actually had the appearance of a woman. This kind of physical change has been reported in obscure pockets of alchemical literature as one of the side effects of taking the Elixir of Life. If the elixir is successful, the subject is said to lose all his hair, teeth and nails, then regrow them and take on younger, smoother, almost asexual facial features.

According to Gerard Heym, Canseliet returned home with only vague recollections of his experiences in Spain – almost as if, said Heym, he had been subjected to some form of hypnosis, designed to make him forget the details of what he had seen and been told.

Curiously enough, Canseliet has admitted his own failure to perfect the Third Degree of the Great Work – the manufacture of the Stone and Elixir. And, apart from being a respected author and savant on the alchemical art, he seems to have gained little personal benefit – financially or otherwise – from his long association with the mysterious Fulcanelli.

The image of perfection

Alchemists believe that, in the final stage of the Great Work, the adept himself is transformed into a 'perfect being' – half man, half woman. What philosophy lies behind this extraordinary claim?



A statue representing Prudence, from the tomb of François II in Nantes Cathedral. It shows the figure of a young girl – with the face of a wise old man on the back of her head. Fulcanelli believed the statue symbolised nature in all her aspects, and also the final stage of the alchemical process, in which opposites combine to produce the perfect, androgynous, being

ON HIS MYSTERIOUS VISIT to Spain in 1954, Eugène Canseliet claimed he again saw his Master, Fulcanelli – transfigured, as it seemed, by the results of his alchemical attainment. The Master appeared not only to have retrieved his youth and vitality, but was clear-skinned and effeminate – perhaps even, Canseliet said, asexual.

Absurd as this idea may sound, especially to those unversed in alchemical philosophy, there is within the deeper esoteric traditions of the Hermetic art a suggestion that with the blinding flash of illumination that heralds success comes a tremendous change in the adept, both spiritual and physical. Like the base metal that attainment of the Philosopher's Stone permits him to transmute into gold, the alchemist himself is transformed utterly. The metamorphosed adept takes the form of a perfect balance of the female and male polarities within human nature – and with it, an outward form of bisexuality or hermaphroditism, certainly in the facial features. These mysterious changes, the results of inner, profound, spiritual experiences – with equally physical, tangible effects – have been said to occur also in saints, holy men and devotional mystics in beatific states.

Could the modern alchemist Fulcanelli have undergone this transformation after attaining the Stone and Elixir and completing the Great Work?

In his second book, *Les demeures philosophales*, Fulcanelli indicates that he is not unaware of this possibility. In fact, he draws particular attention to a remarkable piece of sculpture – one of four statues that guard the tomb of François II in Nantes Cathedral. Fulcanelli calls it Prudence.

In frontal view, it depicts the figure of a beautiful young girl in a hooded cloak and floor-length gown. She seems mesmerised by her own reflection in a strange, convex mirror she holds in her left hand. In her right hand is a set of compasses – or perhaps *dividers*; throughout alchemical literature, there are frequent injunctions to separate and conjoin. And on the back of the girl's head is another face – that of a full-bearded, wise old sage, apparently deep in philosophical contemplation.

Fulcanelli compares this figure of Prudence with the god Janus, the two-faced, son of Apollo and Creusa. Enfolded within the cloak of philosophy, he says, she symbolises nature in all her aspects – both inward and outward. But beneath her exterior veil, he adds, there appears the mysterious image of ancient alchemy, 'and we are, through the attributes of the first, initiated into the secrets of the second.' He writes:

It is generally recommended to unite

A cryptic message

The penultimate chapter of Fulcanelli's book *Le mystère des cathédrales* concerns an unusual stone cross located in the village of Hendaye in the foothills of the Pyrenees. Somewhat circumspectly, Fulcanelli suggests that the monument contains encoded prophecies indicating a future cataclysm.

Fulcanelli believes that the inscription INRI, normally rendered as *Jesus Nazarenus Rex Judeorum* ("Jesus of Nazareth, King of the Jews"), has a second

interpretation that gives the cross its true meaning: *Igne Natura Renovatur Integra*, 'by fire nature is renewed whole'. This, Fulcanelli claims, is a reference to the purifying fire that will soon consume the northern hemisphere.

He also draws attention to the strange inscription OCRULAVES PESUNICA at the head of the cross. This can be broken up to form the phrase *O crux ave spes unica*, 'Hail, o cross, the only hope'. But the strange way in which the inscription is carved suggests that there may be a hidden message.

By an extension of what Fulcanelli calls the phonetic cabala, a retired engineer and student of Fulcanelli's cryptographic writings, Paul Mevry, has arrived at a fascinating new interpretation. OCRULAVES PESUNICA is an anagram of the Latin phrase *Orcus ave pus e canis*, meaning 'Orcus, hail, down from the Dog'. Orcus is the Roman Lord of the Underworld – whom the ancient Egyptians knew as Osiris, the Lord of the Dead. Since the Egyptians associated Osiris with the Dog star, Sirius, could this then be some form of warning of destruction to come from the system of Sirius and its dark companion Sirius B?

And could the very location of the cross at Hendaye – similar to *end-day* – be a clue to the coming apocalypse?

'an old man, hale and vigorous, with a young and beautiful virgin.' Of these alchemical nuptials, a metallic child is born and receives the epithet of *androgyne*, because he possesses all at once the nature of sulphur, his father, and that of his mother, mercury . . . .

Practically all esoteric systems of self-illumination, of raising the base human body and spirit to a higher state, at some stage emphasise the necessity – allegorically or otherwise – to attain this inner balance of the male and female polarities. And the concept even squares with more modern psycho-analytic thinking, especially with Jungian psychology. Indeed, Jung himself devoted more than 10 years of his life to the study of alchemy and wrote several large volumes on the subject, linking its strange 'archetypal' symbolism to that of dreams, inner experiences – and psychology.

The symbolism of the Divine Androgyne is not, by any means, simply physical or sexual. Its main, inner meaning appears to

The tangled web

'The picture of the labyrinth,' Fulcanelli tells us in *Le mystère des cathédrales*, is 'emblematic of the whole labour of the Work. . . . It is there that the *thread of Ariadne* becomes necessary for him [the alchemist] if he is not to wander among the winding paths of the task, unable to extricate himself.'

He goes on to use the phonetic cabala to elucidate the symbolic value of the famous Greek legend of Ariadne, who with a thread helped Theseus to escape after he had slain the Minotaur.

'Ariane (Ariadne) is a form of *airagne*

(araignée, the spider). . . . In Spanish ñ is pronounced gn; [illegible] [pronounced arachne] (the spider) can thus be read *arahne, arahni, arahagne*. Is not our soul the spider, which weaves our own body? . . . The verb [illegible] [airo] means *to take, to seize, to draw, to attract*; whence [illegible] [airen], that which takes, seizes, attracts. Thus [illegible] is the lodestone, that virtue shut up in the body. . . .'

Fulcanelli connects, through some cunning twists of logic, the Provençal *aran, iran, airan* – iron – with the Greek [illegible] meaning both 'lodestone' and 'rising sun'. And there he leaves it – a set of tantalising word-associations, significant only for the initiated.

evoke stability, harmony, perfect balance in all possible ways. In the system of the Jewish *qabalah*, this finds beautiful religious expression in several passages of the Lesser Holy Assembly: 'When the Bride is united to the King in the excellence of the Sabbath, then are all things made one body,' and 'the beauty of the female is completed by the beauty of the male. . . . When the Mother is united to the King, the worlds receive a blessing and are found in the joy of the universe.'

How may these concepts be equated with the strange experience of Canseliet in Spain – or, as he confided to one associate 'in another dimension, as it were'? It is mere conjecture, of course, but could he have been the subject of some form of initiation into the deeper mysteries of the Hermetic Quest? In the light of alchemical tradition, there would seem to be no other logical explanation for Canseliet's bizarre encounter.

And why should an elderly man, respected for decades as an authority on alchemy, invent such a weird and wonderful tale – at the risk of his reputation?

No one has managed to identify the historical person who hid behind the cloaked pseudonym of Fulcanelli. And M. Canseliet, if he *does* know the personality behind that name, has certainly respected the anonymity of his most unusual and erudite Master.

Above left: a Roman coin showing the two faces of Janus, Roman god of doors and archways, sometimes referred to as *divom deus*, the god of gods

Below: in the Lallement house in Bourges is a *bas-relief* of the Golden Fleece (right). Fulcanelli claimed the story was 'a complete representation of the hermetic process'

Witchcraft

The practice of modern witchcraft has little in common with the black hats and broomsticks of fairy story. With its roots in the medieval worship of nature and fertility, a coven of witches can, like any other religious body, use its magic to heal and strengthen its believers, or for darker and more sinister purposes.

Father of witchcraft

Are today's witches practising an ancient tradition that, as they often claim, dates back to medieval times – or are they heirs to a relatively new set of beliefs? Where do the roots of modern witchcraft and the occult revival lie?

Right, a 16th-century illustration by Hans Baldung depicts the witches' sabbat of popular medieval imagination. Here a young witch is being 'flown' to the unholy meeting assisted by an old hag

Below: modern witches, members of the Church of Wicca in Amarillo, Texas, USA, prepare candles for a healing session

Below left: Gerald Gardner as a boy. He came from a family of eccentrics and appears to have continued their tradition

PERHAPS ONE OF THE ODDEST and most enduring social phenomena of the 1960s and 1970s was the so-called 'occult explosion'. Faced with wars, civil strife, growing unemployment and the ever present shadow of nuclear war, the young looked towards Eastern mysticism, astrology, alchemy, and even visitors from outer space, for solace.

For many, witchcraft – the 'Old Religion' as they termed it – provided the answers. Of those who practise it not a few believe they are involved in what was once the universal religion of Stone Age Man. They point out that the very word stems from the Old English 'wicca' – wise – and the general belief is that the ancient wisdom of the witches, driven underground by persecution during the medieval period, nevertheless endured, springing safely to full bloom again when the last Witchcraft Act of 1735 was repealed in 1951 to be replaced with the Fraudulent Mediums Act.

Like all other religious movements, the witchcraft revival has its schisms and breakaway groups, but their basic beliefs and rituals are shared. They see traditional witchcraft as having concerned the world's turning; the growing and ripening of corn; the fertility of animals. Its magic was of the 'white' variety, used to heal and strengthen believers, since it was said that any evil spell would rebound three times on its user. 'Covens' meeting at 'sabbats' were not

Devil-worshipping groups blasphemously parodying the Christian mass, but were simply paying ritual homage, with wine, dancing and occasional sexual activity, to the ancient gods and goddesses: Osiris and Isis, Pan and Diana, Cernunnos and Arianrod.

By the early 1980s such proselytising had attracted an estimated 100,000 followers in Britain and the United States alone – though the secrecy that surrounds many groups within the movement makes headcounting difficult.

The tenets of modern witchcraft are purported to be enshrined in a common manual known as the 'Book of Shadows'. It is claimed that through this book, copied secretly 'in their own hand of write' by successive coven priests and priestesses, the ancient cult has survived for over a thousand years.

One of the main perpetrators of this line of thought was a retired British customs officer named Gerald Brousseau Gardner. The existence of the 'Book of Shadows' was first revealed in his writings. The question is did he discover an hereditary cult in Britain that was older than Christianity, or did he invent much of witchcraft as it is practised today?

Odd relations

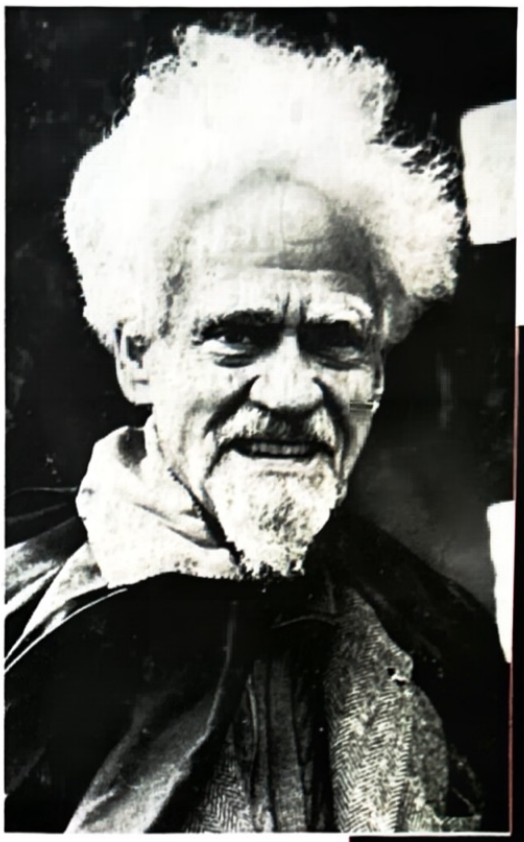
Gardner was born on 13 June 1884, at Great Crosby, Lancashire, the son of a wealthy timber merchant. The entire family were known as eccentrics to the locals; Gerald's elder brother seems to have had a dislike of nature and spent much of his time indoors, shooting small birds from an upper storey window with a heavy calibre rifle. Uncle Joe Gardner, who lived across the road, was a religious maniac who loathed Catholicism, published anti-papist tracts, and built churches for both the Methodists and the Anglicans, attending services at each establishment in turn. William Gardner, Gerald's father, was perhaps the oddest of all; when caught in a shower of rain, it was his habit to take off his clothes, fold them neatly, and sit naked upon them until the weather had cleared.

Gerald Gardner lived in these surroundings until he was seven, then he began spending winters abroad with an Irish nannie, Josephine McCombie. For nine years they travelled together in the Canary Islands, North Africa and the Middle East. In 1900 Josephine married a tea planter from Ceylon (now Sri Lanka). Gerald accompanied the newly-weds to Colombo where, for the next 36 years, he made his living as a rubber planter and colonial customs officer. He had an eclectic nature and by the time he came to return to England in 1936 he had become an amateur archaeologist expert in edged weapons, and a writer, though his existing letters and manuscripts show him to have been nearly dyslexic. He had also developed an interest in mysticism, the occult and Western Spiritualism, which was shared by his wife Donna, whom he had married while on leave in England in 1927.

Once back in England, Gardner joined the highly respectable British Folklore Society, eventually becoming a member of the governing council, and periodically contributing to the society's journal *Folklore*.

But alongside his life of fringe academicism ran a parallel, more clandestine existence. In 1939 he claimed to have met an elderly woman whom he named 'Dorothy' or 'Daffo'. He maintained she was the high priestess of the last remaining coven in Britain, and she was willing to initiate Gardner into her group.

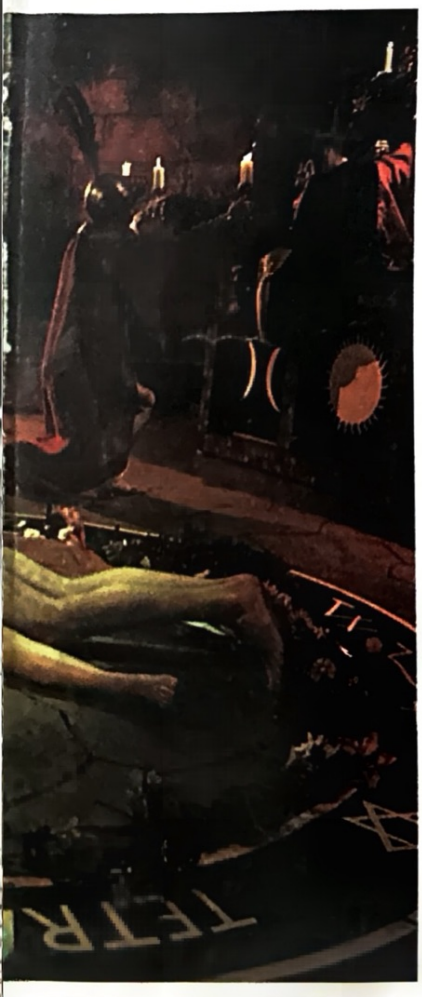
It was under her tutelage that Gardner apparently learned of the Book of Shadows. He copied it out by hand as tradition demanded he should do. He also claimed to have learned how the witches of the New Forest descended by a kind of 'apostolic succession' from the witches of the Middle Ages and beyond. Gardner declared they



Above: Gerald Gardner, the man whose writings, purportedly based on ancient witchcraft practices, started the occult revival in the 1960s

Right: modern witches in action. Nudity, copulation and voyeurism – Gardner was inordinately fond of each – are part of the rituals in many of today's covens

With the proceeds from his books Gardner bought a ruined windmill and outbuildings (left, the property in 1983) at Castledown, Isle of Man, to house his museum, which exhibited witchcraft 'relics' purchased from the collector Cecil H. Williamson. An illustration (right) advertising the museum may have been drawn by Gardner himself. When he died, his High Priestess, Mrs Monique Wilson (below), inherited the Castledown property



were witches dedicated to the power of good, despite the persecution they had suffered throughout history, most notably during the witch trials of the medieval period. During the Napoleonic wars they had helped to repel a French invasion, and they were to perform a similar service during the Second World War against Hitler – this, at least, is how Gardner told it.

They performed their dancing rituals in the nude, indulged in ritual bondage and mild flagellation, and at major ceremonies ('Esbats') they undertook the 'Great Rite': sexual intercourse between the High Priestess and Priest in full view of the assembled coven. They appealed to Gerald Gardner enormously.

In 1949, according to his own account, Dorothy gave Gardner permission to reveal, if a trifle obliquely, some of the secrets of the 'Wicca' in a novel entitled *High magick's aid*. Two further, more specific, books were to be published with the repeal of the Witchcraft Act. Both caused a minor sensation in the press, and overnight Gardner became notorious. He bought a ruined windmill at Castledown in the Isle of Man, purchased a number of witchcraft 'relics' and set up a witchcraft museum and a local coven of his own. In 1960 he began travelling again. He died on 12 February 1964 while on a cruise along the North African coast.

The publication of his will showed that he died a rich man. His museum and cottage went to his High Priestess Mrs Monique Wilson and her husband, and the rest was divided between a few remaining relatives and 'initiates' into the coven.

The man behind the magic

On the surface Gardner appears to have been an academic dilettante – no more outrageous than many a colonial character from the dying days of the British Empire. Unfortunately there is clear evidence that he was also a fraud of a very shallow kind.

The membership list of the Folklore Society for November 1950 ascribes him as holding the degrees of Master of Arts and Doctor of Philosophy. In the first edition of the *Authors' and writers' who's who* (1963) he appears to have also acquired a Doctorate of Literature, and it states he was 'privately educated'. In fact, he admitted to Jack Bracelin, one of his followers who wrote a biography of him in 1960, that he taught himself

to read. The suggestion is that he used *Strand Magazine* as his primer during his first sojourn abroad. There is no record of his having either attended a university or been awarded an honorary degree.

According to Francis King and Isobel Sutherland in their book *The rebirth of magic* Gardner was friendly with J. S. M. Ward, a self-appointed abbot who had been involved in several bogus universities. The chances are that it was from him that Gardner acquired his various doctorates.

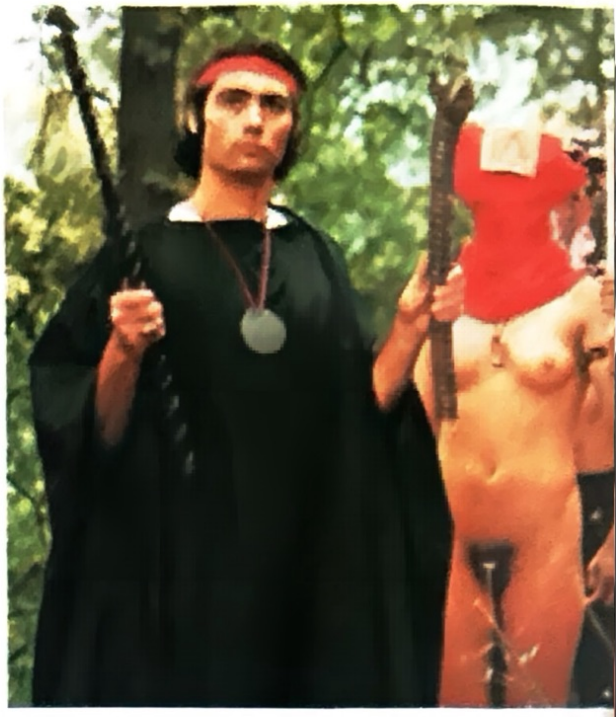
Nor were his writings unimpeachable. It is perhaps significant that, though he was a member of its council for 18 years, the Folklore Society published no obituary of him in its journal. Miss Christina Hole, a leading British folklorist and author, and editor of *Folklore*, wrote to writer Frank Smyth in 1969 to explain:

> Dr [*sic*] Gardner had a very curious personality. It did not inspire confidence – at least not in me, nor in a number of people interested in witchcraft and kindred matters. His theories were in themselves somewhat peculiar. I remember a meeting when the composition of the Council for the following year was discussed, and the question raised as to whether his presence was really advantageous to the Society. Nothing was done about it, and his name was allowed to go forward as before but the doubt was clearly felt and expressed.

In 1954 Stewart Sanderson, director of the Institute of Dialect and Folk-Life Studies at Leeds University, was at an international conference on maritime folklore at which Gardner was giving a paper. His thesis, on the development of the Manx fishing craft, appeared on the surface to be a superb piece of research. However, Sanderson thought it rather odd that the article gave no reference or acknowledgements to earlier studies on the subject. As he recalls: 'It was in fact a scissors and paste job, with a sprinkling of folklore beliefs at the end, based on Basil and Eleanor Megaw's "The development of the Manx fishing craft" in the *Proceedings* of the Isle of Man Natural History and Antiquarian Society.'

Gardner had not based his entire paper on the Megaws' work but had had the good grace to pepper it with material from another article that had appeared in *Mariner's Mirror* in April 1941.

If he was willing or reckless enough to risk exposure on such well-documented subjects, how far can his testimony be trusted on the subject of the 'Wicca'?



Right: satanic goings on in Provence, France. Heading the procession is the Black Magus, behind him are two female initiates. The sado-masochistic overtones of this black magic group are also found in some covens practising white magic, but whereas the latter serve the 'forces of light' the former pays homage to the 'forces of darkness'.

Alex Sanders (left) and his then wife Maxine, 'King and Queen of the Witches', with High Priest Paul King. Sanders started his own cult based on rituals he claimed had been passed on to him by his grandmother. However, there is a marked similarity between the Alexandrian and the Gardnerian brand of witchcraft, and it seems likely that Sanders picked up most of his ideas from Gardner's 'Book of Shadows'.

Gardner's sources

The actual rituals, beliefs and text of the Book of Shadows that Gardner claimed were handed on to him by Dorothy appeared in full several times in the 1970s. And on examination the rituals described appear to be very much a 'scissors and paste job'.

Their most immediate source is the work of Dr Margaret Murray. She was the first to propound the theory in the 1940s that witchcraft was an organised underground religion. A distinguished professor of Egyptology, Dr Murray's witchcraft theories have nevertheless been squarely refuted by medieval and anthropological scholars.

Other sources are not difficult to find. Gardner drew on Charles Leland's *Aradia* (1897), De Givry's *Witchcraft, magic and alchemy*, which appeared in its first English translation in 1931, and on Aleister Crowley's 'inspired' prose poem *Book of the law*. S. L. MacGregor Mathers's edition of *The*

Right a heart, nails and the medieval witch's bottle in which they were found. It is thought that the objects were used to reverse death spells. Gardnerian witches dabble in white magic only, believing that any evil spell will rebound with triple strength on its users

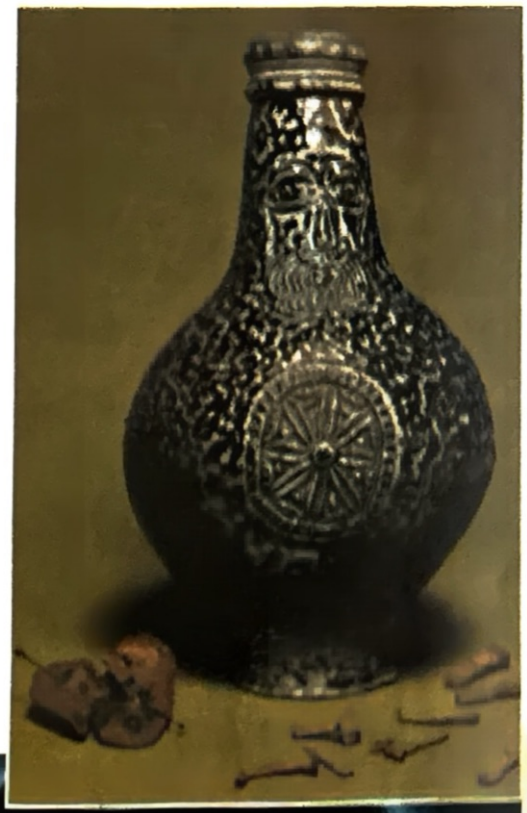
grimoire Key of Solomon, a 15th-century magical grimoire handbook of ritual magic), was also grist to the Gardner mill. In addition, many of the rituals of the Order of the Golden Dawn, co-founded by Mathers in 1888, found their way into Gardner's opus, even a rustic-sounding verse by Rudyard Kipling was topped, tailed and slightly altered to fit his August Eve rite.

In short, Gardner's Book of Shadows was a fake with many of the statements contained therein being historically inaccurate. Take, for example, his suggestion that Dorothy and her followers believed in reincarnation. Commitment to such a doctrine immediately places the coven very firmly in the post 1870s, since in the medieval period the concept of reincarnation did not exist, except in the modified form of a belief in the transmigration of souls.

More importantly, there is no trace of witchcraft, of the type condemned during the Middle Ages, ever having been an organised practice at all. The great witch hunts that raged throughout Europe in the 16th and 17th centuries cannot be taken as evidence that a diabolical religion opposed to Christianity existed. Such a notion was a fantasy born in the minds of the late medieval inquisitors who viewed any practices existing outside the strict framework of Christianity as Devil worship. Men who masterminded the purges did so from confused beliefs both about the dualist heresies of such groups as the Manichees and the Cathars and about ritual magic – though invariably this was practised by individuals.

Of course, once the purges got under way many witches came forward and confessed to having 'flown' to the Sabbath on broomsticks. Often they made their 'confessions' under torture. And when they came forward of their own volition, incriminating themselves and often neighbours too, they were simply responding to the climate that the inquisitors had created with all their talk of devils and demons.

However, the interesting point about Gardner's 'Wicca' is that, despite its fraudulent beginnings, it has grown under the hands of sincere, if misguided, believers to be a viable religious movement, which seems to fulfill deep psychological needs that the more orthodox churches have failed to supply.



In 1936 Gardner published a pamphlet on the wavy-edged Malaysian *Kris*, or dagger (right), which was well-received by folklorists, and in March 1939 he joined the British Folklore Society. He marked the occasion of his inauguration with an address on the subject of a box of 'witch relics', alleged to have belonged to Matthew Hopkins, the 17th-century 'Witchfinder General'

Witchcraft -and worse

People fear witchcraft because they believe that it has a supernatural capacity to harm them. But does it really have the magical powers that its adherents claim?

ON 9 MARCH 1967 an odd advertisement appeared in the 'Personal' columns of *The Times*: 'A witch of full powers is urgently sought to lift a 73-year-old curse and help restore the family fortunes of an afflicted nobleman. Employment genuinely offered.'

Some days later it was revealed that the advertiser was the bankrupt 74-year-old Duke of Leinster, head of one of Britain's oldest families. Over 170 people offered assistance. Whether or not witchcraft helped, the destitute duke was able to pay off his debts and was welcomed back into society before his death in the 1970s.

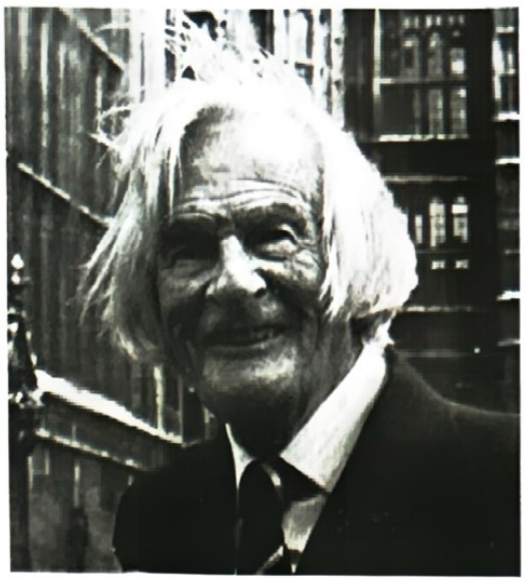
Some of the 'witches' who came to the ageing aristocrat's aid were followers of Gerald Gardner who, as we have seen, invented much of modern witchcraft, others were members of 'independent' covens and some were lone operators; all of them believed – or apparently believed – that they were inheritors of a craft that had passed, like the carpenter's craft, from master to apprentice through the ages. Can any of their claims to magical powers be historically substantiated?

To begin with, there appears to have been no time or place on Earth where witchcraft and magic have not been practised. Man's attempt to control and come to terms with exterior natural phenomena through ritual and ceremony is an essential part of his way of thinking and behaving. The evidence of primitive sculpture and cave painting suggests the eternal preoccupation of Man with magic and its effect on fertility, rainmaking, success in hunting, the warding off of sickness and evil influences – 'modern' witches, students of Gardner, would claim these are their concerns, too. As Montague Summers put it:

> The reason why 'man came forth believing in terrors and evils' is simply that terrors and evils were there and very real and the simplicity of primitive man was sensibly conscious of their activities and of their presence all about him.

By the time of the earliest written texts on magic, the Akkadean-Chaldean inscriptions of Nineveh dating from the second millennium BC, the practice of black and white

Under the laws of Hammurabi (right), king of ancient Babylonia from around 1792 BC to 1750 BC, anyone accused of witchcraft was to be thrown into 'the holy river': 'if the holy river overcome him, he who accused him shall take to himself his house.' Persecution of witches both by ducking and by burning was common in Europe, too, from the medieval period onwards. A witch is 'swum' in this 16th-century engraving (below right), and another is burnt in this German illustration of 1555 (far right). In the reign of Aethelstan of England (below), however, the punishment for witchcraft laid down in AD 924 was a mere 120 days' imprisonment



Right: the Duke of Leinster in 1975. Events in his life had taken a decided turn for the better since 1967 when, bankrupt, he had placed an advertisement in the 'Personal' columns of *The Times* requesting the services of a witch to lift a 73-year-old curse on the family fortunes

magic had already developed into what E. M. Butler, in *Ritual magic*, termed 'an extremely elaborate and well-developed demonology', and the practices described are almost identical to those associated with European witches in the Middle Ages. One inscription reads:

> He who has fashioned images corresponding to my whole appearance has bewitched my whole appearance; he has seized the magic draught prepared for me and has soiled my garments; he has torn my garments and has mingled his magic herb with the dust of my feet. May the fire-God, the hero, turn their magic to naught.

The persecution of witches followed a familiar pattern too. Hammurabi of Nineveh, in a legal code dating from the 17th century BC, laid down that:

> If a man has laid a charge of witchcraft on another man and has not justified it, he upon whom the witchcraft charge is laid shall go to the holy river, and if the holy river overcome him, he who accused him shall take to himself his house.

The rules are rather different from 17th-century East Anglian witch-floating, but the instinct is the same.

Between Nineveh and Babylon, the Graeco-Egyptians and the Jewish authors of the *qabalah*, lies a certain continuity of magical method and belief. Love spells demanding the decapitation of white cockerels and the drinking of animal blood, for example, become commonplace, as does the gathering of herbs for potions.

The Bible describes several encounters with witches, notably that between Saul and the witch of Endor. It condemns them too in texts that were used by the medieval inquisitor to justify their own orgies of torture and burning. And wrongly too as it happens, since as early as 1584 Reginald Scot, in *Discovery of witchcraft*, had pointed out that the most famous anti-witch text of all, 'Thou shalt not suffer a witch to live,' properly translates as 'Thou shalt not suffer poisoners to live.'

However, although the Bible takes individual practitioners of witchcraft as a matter of course, there is no evidence whatsoever to suggest that it was an organised religion of the kind claimed by Gerald Gardner and his followers.

Mass necromancy

Many of the writers of ancient Greece mention witchcraft as a practical reality, with necromancy – the raising of the dead – as one of its principal aims. Aeschylus in his play *The Persians* describes the raising of Darius, while Homer in the ninth book of the *Odyssey* tells of a mass raising in gory detail.

The Romans Tacitus, Virgil, Horace, Tibullus, Livy and Pliny all describe witches as commonplace, and there is no doubt that witchcraft spread throughout the Roman Empire. After the break-up of the Empire in Britain, however, there are few literary mentions of witches, except as mild offenders against the law.

In the Saxon period, an edict was issued against those who 'practise any heathenship or in any way love witchcraft'. The penalty for such a crime was 10 half-marks: 'half to Christ, half to the King'. Under Aethelstan in AD 924, even when witchcraft had apparently been responsible for death, the punishment was only 120 days imprisonment. This was rather more lenient than the law issued by the pious King Edgar, in AD 959, who ordained death for anyone disobeying his edict that on Christian feast days 'well worshippings, and necromancies and divinations and heathen songs and devil's games be abstained from.'

Undoubtedly during this period there were still lingering traces of primitive 'heathenism' – the real 'Old Religion' of the pre-Christian era – throughout Britain. Many people clung determinedly to their old gods for several centuries after missionaries such as Aidan and Columba had begun preaching

Left: a witch doctor offers cures at a market in Bali. Throughout Indonesia witchcraft is accepted as a normal part of everyday life – in Europe, by contrast, witchcraft is generally regarded with suspicion, and the vogue enjoyed by witchcraft during the 1960s and 1970s was seen by many as threatening

Below: a detail from a 15th-century manuscript showing members of the Manichee sect engaging in heretical practices. Primitive witchcraft was often confused with heresies such as Manicheism – and both were brutally dealt with by the Roman Catholic Church

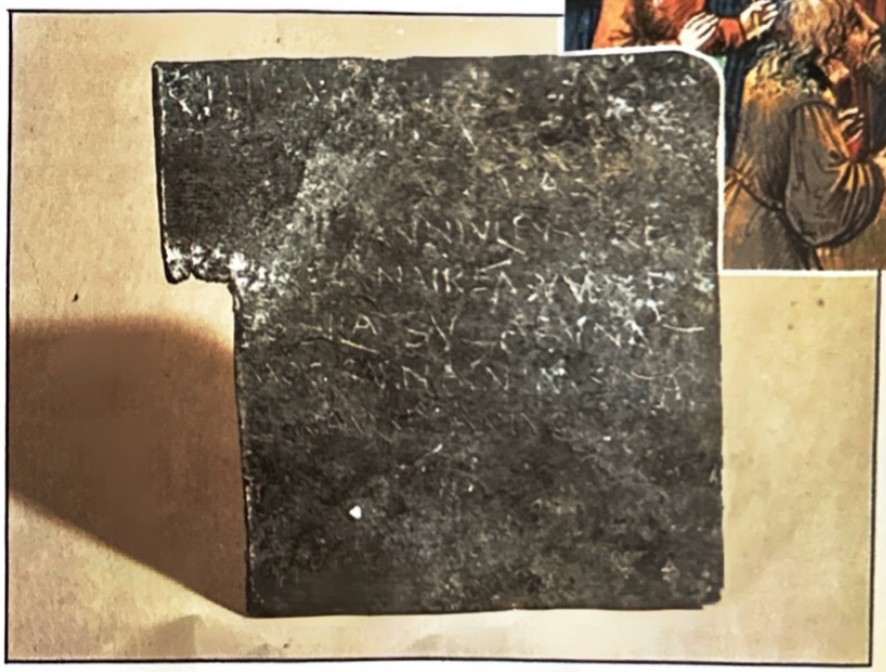
Bottom: a Roman curse scratched on a lead tablet: 'May he who carried off Sylvia from me become as liquid as water. [May] he who obscenely devours her become dumb'

the Gospel. But those who continued to worship in the old ways were not by definition practitioners of witchcraft. In late Saxon and Norman times there were indeed witches but they tended to operate alone. William the Conqueror, for instance, called one in 'to disconcert by her magic all the warlike devices of the Saxons' at the siege of Ely in 1071. She was placed on a wooden siege tower that was promptly burned down by the defenders led by Hereward the Wake.

It was not until almost 100 years later, with the founding of the Inquisition in 1163 by the Council of Tours, that the Church began to confuse primitive witchcraft with the beliefs of such heretical sects as the Cathars and the Manichees. This misplaced notion gave rise to the ideas of Satanism and group Devil-worship by 'covynes' – Old French for 'coming together' or 'conspiracy'. And so began the systematic persecution of people purported to be in cahoots with the Devil.

Why did the Church determine to stamp out the Cathars and the Manichees? The theology behind their reasoning is complex but was rooted in the idea of a 'dualism' with God on one side and the powers of evil – Satan – on the other. While the Church held that Satan was the lesser power, operating within the 'permission' granted him by God, their opponents saw God and the Devil as equals, engaged in an eternal running fight with mankind as the battle-ground.

Once the great machinery of the Inquisition got rolling there was to be no stopping it. With time it would crush the Manichees, the Waldensians, the Cathars and the Knights Templar before moving on to destroy individuals whose only crime may have been to foresee a neighbour's death in a dream. In such an environment it was unlikely that the simple witchcraft of village 'wise' men and women could survive for long



A lore unto themselves

Throughout the year, modern witches meet on nights of the full Moon, and gather to celebrate certain high days known as 'sabbats'. There are eight of these: May Eve (30 April), Hallowe'en (31 October), Candlemas (2 February), Lammas (1 August), the equinoxes (21 March and 21 September) and the solstices (21 June and 21 December).

Left: a modern coven conducts an initiation ceremony

A typical sabbat will involve all members of the coven, ideally 13 in number but generally between 6 and 20. Usually the ceremonies are conducted in the nude, which means they must be performed indoors or at some isolated site.

Traditionally, the coven is led by a High Priestess as representative of the Great Goddess, but some groups have a male leader, most frequently referred to as High Priest or Magus. At the site of the sabbat, a magic circle is drawn, and a ring of witches is formed within it, hand to hand. The High Priestess, who should 'carry Phallic Wand, or Riding Pole, phallic or pine-cone tipped, if possible', enters the circle and is greeted by the senior male with the five-fold kiss: on knees, genitals, breasts and lips. Then follows the ceremony of the 'drawing down of the Moon', and the initiation of new members.

The evening's entertainment may conclude with the Great Rite, in which the High Priest and Priestess have sexual intercourse, either symbolically or in reality, possibly (although not usually) in front of the assembled company.

before becoming entangled with charges of heresy.

Gradually the process of trying and condemning witches became entirely divorced from ordinary law; lawyers and judges were no longer needed and, in 1398, the University of Paris opened further floodgates by decreeing that any 'superstitious practice' that had results that could not 'reasonably' be accredited to God and nature had to be the result of a pact with the Devil. That and subsequent judgements spread terror throughout Europe; witches and demons were everywhere, ready to strike down Christians, blight their crops, render them impotent and destroy their souls.

No doubt many of the accused actually believed themselves to be witches, and for every 10 innocents tortured to extract a confession of guilt there were probably an equal number who volunteered a confession, convinced that they were genuinely possessed by demons. Such a phenomenon is well known to modern police officers whenever a particularly sensational murder is committed; neither is it unknown for a spate of imitative crimes to follow shortly after a well-publicised killing. It is agreed that 'group witchcraft' was originally the invention of the Inquisition, but it is probable that in some isolated cases a strong leader could delude a group of his or her neighbours into joining a 'coven' for the thrill of it.

Undoubtedly there were, and still are, individuals with 'strange' powers. However, the traditional belief that they are the 'seventh child of a seventh child' is not so much a statement of fact as an indication of their rarity. The more down-to-earth lore associated with country witchcraft today – wart curing, the knowledge of herbs and the habits of animals – was widespread in a pre-industrial age simply because people were closer to nature; for instance, they grew up knowing about the 'magic' properties of the plants that surrounded them. Today when such skills are practised they naturally smack of the truly 'occult' – in the sense of hidden – skill.

Curiously, it was a member of the Spanish Inquisition, Alonso de Salazar Frias, who in 1611 pronounced an opinion that may well have applied not only to his own time but to the myriad 'witch' cults spawned in Britain and the United States since the 1960s. Over a period of eight weeks he talked to 1800 witches, many of whom had made voluntary confessions. His approach was astonishingly open-minded, and his conclusion salutary:

> Considering the above with all the Christian attention in my power, I have not found even indications from which to infer that a single act of witchcraft has really occurred. . . . I deduce the importance of silence, and reserve from the experience that these were neither witches nor bewitched until they were talked and written about.

'The wickedest man in the world'

Aleister Crowley, one of the most infamous Englishmen of the 20th century, had many interests: mountaineering, poetry, drugs, pornography – and 'magick'. This mysterious and sinister man believed he was the 'Beast' of the book of Revelation

IN THE LATE 20th century psychical researchers, who tend to call themselves 'parapsychologists', largely concern themselves with mental phenomena such as telepathy and precognition. However important the scientific implications of such supposed phenomena there can be no doubt that they are less spectacular than the alleged physical phenomena of mediumship – such things as levitation and materialisations of departed spirits – which were the main focus of psychic investigation during the period 1860 to 1930.

At that time there were many physical mediums, the most notable of them, apart from the Victorian levitator D.D. Home, being Eusapia Palladino, an Italian medium whose powers impressed such serious researchers as Everard Feilding and Hereward Carrington.

But one amateur investigator in particular was not at all impressed; after a sitting with Palladino he came to the conclusion that she was no more than a clever illusionist and that all those who had recorded her supernatural feats, notably the extrusion of a phantom 'ectoplasmic' limb, had been duped.

The seance in question took place in 1913 and the researcher was trying to answer one question that had presented itself to his mind: 'Feilding and the rest are clever, wary, experienced and critical, but even so, can I be sure that when they describe what occurs they are dependable witnesses?'

Palladino sat at the end of a table, at her back a curtained cabinet containing a stand on which were placed the various objects intended to be manipulated by her ghostly arm. Her right wrist was gripped by Mary d'Este Sturges; her left by the investigator who had arranged the sitting.

The seance began in a way typical of many Palladino sittings – the curtain over the cabinet first bulged and then fell across the medium's left arm and hand and the investigator's right hand and arm. By turning his head the researcher could now see into the cabinet where he glimpsed the movements of a shadowy left arm. He reasoned to himself that this could not be the medium's left arm as he himself was holding it; but as the mysterious arm disappeared

Above Aleister Crowley in middle age, having perfected his disturbing hypnotic stare. A few – usually unbalanced – women found him irresistible, but most found him repulsive. Even as an undergraduate at Trinity College, Cambridge (right), it was clear that Crowley had mapped out a future for himself that would be pure neither in mind nor in body. As a student, however, he contented himself with writing and printing poetry, including *Snowdrops from a curate's garden*, *Scented garden* and *White stains* pornographic juvenilia that is not easily available today

from view he suddenly felt Palladino's wrist slipping into his hand *although he had never been conscious of it ever leaving his grasp.*

This minor but significant incident led the researcher to discount all the reports given by others who had attended Palladino's seances. 'If I,' he argued, '. . . cannot be relied upon to say whether I am or not holding a woman's wrist, is it not possible that even experts, admittedly excited by the rapidity with which one startling phenomenon succeeds another, may deceive themselves as to the conditions of the control?'

This investigator went on to have sittings with other mediums and to study the findings of other psychical researchers. As a result he became a complete sceptic, deciding that almost all the reported phenomena of the seance room were the outcome of fraud and self-deception.

Enter Aleister Crowley

Yet it is perhaps surprising that this particular investigator came to such negative conclusions. For, far from being a pure materialist, he was himself a dedicated occultist; he was none other than Aleister Crowley, the practising ritual magician who, in the 1920s, was denounced as 'the wickedest man in the world'. His combination of total disbelief in Spiritualist mediumship with total belief in ritual magic was typical of the man; a thread of ambivalence and paradox ran through his life, his teachings, and his relationship with others.

Edward Alexander Crowley – later he abandoned his Christian names in favour of the strangely spelt 'Aleister' – was born in October 1875. His parents were members of the Plymouth Brethren, that most rigid of Protestant sects, and they brought up their only son in all its rigid beliefs – that every word of the Bible was the literal truth, inspired by the Holy Spirit, that the Catholic and Anglican Churches were 'synagogues of Satan', that the overwhelming majority of mankind was doomed by a just God to roast in hellfire for all eternity.

Above: Crowley as family man in 1910. His marriage ('a detestable institution' he called it later) to Rose Kelly, a clergyman's daughter, was apparently perfectly happy until he discovered she was a dipsomaniac. After his divorce he called his mistresses 'Scarlet Women'

Left: Allan Bennett, one of the few men whom Crowley revered, describing his mind as being 'pure, piercing and profound beyond any other'. Bennett taught Crowley magic when they were both members of the Order of the Golden Dawn. But they took different paths: Bennett went to Ceylon (now Sri Lanka) and became a Buddhist monk. Crowley became 'the Beast'

The elder Crowley died in 1887, and young Aleister became the object of his mother's fanatical venom. On more than one occasion she accused him of being the actual 'Great Beast' of the book of Revelation whose number is said to be 666. To the end of his life Crowley did everything he could to live up to this archetypal image. He may even have come to believe he really was the biblical Beast.

He was sent away to a school run for the sons of Brethren. Here his experiences were such that he lost his Christian faith and acquired a hatred of the Brethren and their beliefs that was to survive throughout his long and eventful life.

In October 1895 Crowley, in possession of a fortune of £30,000 that he had inherited on reaching the age of 21, became a student of

Trinity College, Cambridge. His three years at the university were happy ones; he collected rare books, wrote much poetry, spent his holidays climbing in the Alps – and became interested in the occult.

This led him, in 1898, to become a Neophyte – a student member – of 'the Hermetic Order of the Golden Dawn', a semi-secret society devoted to the study of the 'occult arts and sciences', including the evocation of spirits, divination, and even alchemy.

Crowley considered most of his fellow members of the Golden Dawn to be 'absolute nonentities' but he was impressed by the occult magical abilities of two of them, Cecil Jones and Allan Bennett. The latter took up residence with Crowley in his London flat, and together the two carried out many occult experiments, among them the 'consecration' – the charging with magical powers – of a talisman intended to cure a certain Lady Hall of a serious illness.

This was duly prepared and handed over. Unfortunately, however, neither Lady Hall nor her daughter followed Crowley's precise instructions. So that when the talisman was applied to 'the venerable old lady' she was 'seized with a violent series of fits and nearly died'.

The consecration that produced these unpleasant effects was probably carried out in what Crowley called the White Temple, a room lined with mirrors and devoted to white magic. But his flat also included another room, the Black Temple, in which the altar was supported by the image of a Negro standing on his hands and which contained a skeleton to which Crowley was silly enough to sacrifice sparrows.

Invisible vandals

There seems to have been a thoroughly sinister atmosphere about Crowley's flat. One evening in 1899 he and a friend, also an occultist, went out to dinner. On their return they found that the locked door of the White Temple had been mysteriously opened, its furniture overturned and the 'magical symbols' that it held scattered around the room. As Crowley and his friend restored the room to order they clairvoyantly observed 'semi-materialised beings . . . marching around the main room in almost unending procession'.

In 1900 the Golden Dawn split into two competing factions. Crowley managed to quarrel with both of them and for the next three years or so lost interest in Western occultism. Instead he wrote poetry, travelled the world and got married to a lady whom he called 'Ouarda the Seer', although she knew little about the occult and probably cared less.

In March 1904 the two were staying in Cairo. Crowley, wanting to demonstrate his occult abilities to his wife, carried out a number of magical rites. The results, if

Above: Crowley the magician. Despite some of the more ludicrous poses he affected (right), the core of his 'magick' seems to be genuine enough. His famous, and much misunderstood, 'Do what thou wilt shall be the whole of the law' was amplified by 'Love is the law; love under will'. He constantly urged his followers to seek their true selves, for this, he believed, was the divine purpose of all human lives. Perhaps he had taken the idea from the Elizabethan magician Dr Dee, who had written 'Do that which most pleaseth you. . . .' These 'laws' referred to profound spiritual truths, but the unenlightened took them to advocate moral laxity; in his less noble moments so did Crowley

Left: Leila Waddell, violinist and Crowley's magical assistant in London in 1910, seen here in her robes as 'Sister Cybele'. She played the violin in Crowley's Rites of Eleusis at Caxton Hall, which was open to the public. Crowley claimed to have magically changed her from being 'a fifth-rate fiddler' to a musical genius – but just for the evening

Crowley's written records are to be believed, were startling. He received a psychic message, flashed into his brain from some unknown source, which told him that a new epoch in history was about to begin. He, Crowley, had been chosen to be the prophet of this new age. Crowley's wife also received a message: her husband was to sit down for one hour on three consecutive days with a pen and paper before him. The gods would then dictate to him, in voices audible only to their chosen prophet, the gospel of the new age that was about to dawn.

Crowley obeyed the directions. He heard a voice, presumably originating in the depths of his own mind, and wrote down the words dictated to him. The result was *The book of the law*, a prose poem, which Crowley came to believe was literally inspired in precisely the same way that his parents had believed the Bible to be inspired.

The meaning of some parts of the *The book of the law* is obscure. Even Crowley admitted that some passages of it were beyond his own comprehension. But the basic message was clear. Crowley was to be the prophet of a new era, 'the Age of Horus'. In the new age all the old religions of mankind – Christianity, Islam, Buddhism – will pass away and be replaced by a new faith of 'Force and Fire', the basic moral principle of which will be complete self-fulfilment. For 'Every man and woman is a star' – in other words, each individual has an absolute right to develop in his or her own way. 'Do what thou wilt shall be the whole of the law', says the new gospel, for 'Thou hast no right but to do thy will' and 'The word of sin is restriction'.

In fairness to Crowley and his followers it has to be emphasised that the former was always careful to point out that 'Do what thou wilt' is not quite the same as 'Do what you like'. When *The book of the law* says 'Do what thou wilt', claimed Crowley, it means 'find the way of life that is in accordance with your inmost nature and then live it to the full'.

For some years Crowley only half-believed in the truth and importance of *The book of the law*, but by 1910 it had mastered him, and he devoted the rest of his life to spreading its message and converting others to the belief that he, Aleister Crowley, was a new messiah.

The methods he adopted to achieve these ends included the authorship of numerous books, most of them eventually published at the expense of himself and his friends and followers, the setting up of two occult fraternities, the public performance of occult ceremonies at London's Caxton Hall, and even the establishment of an 'Abbey', situated in a slightly derelict Sicilian farmhouse, the inmates of which devoted themselves to the practices of the new faith.

In the years before the outbreak of the First World War Crowley and a few disciples carried out an intensive propaganda campaign in England. This, although it cost all Crowley's money and much of that belonging to his friends, was notably unsuccessful. Few converts were made and Crowley was subjected to much unfavourable publicity.

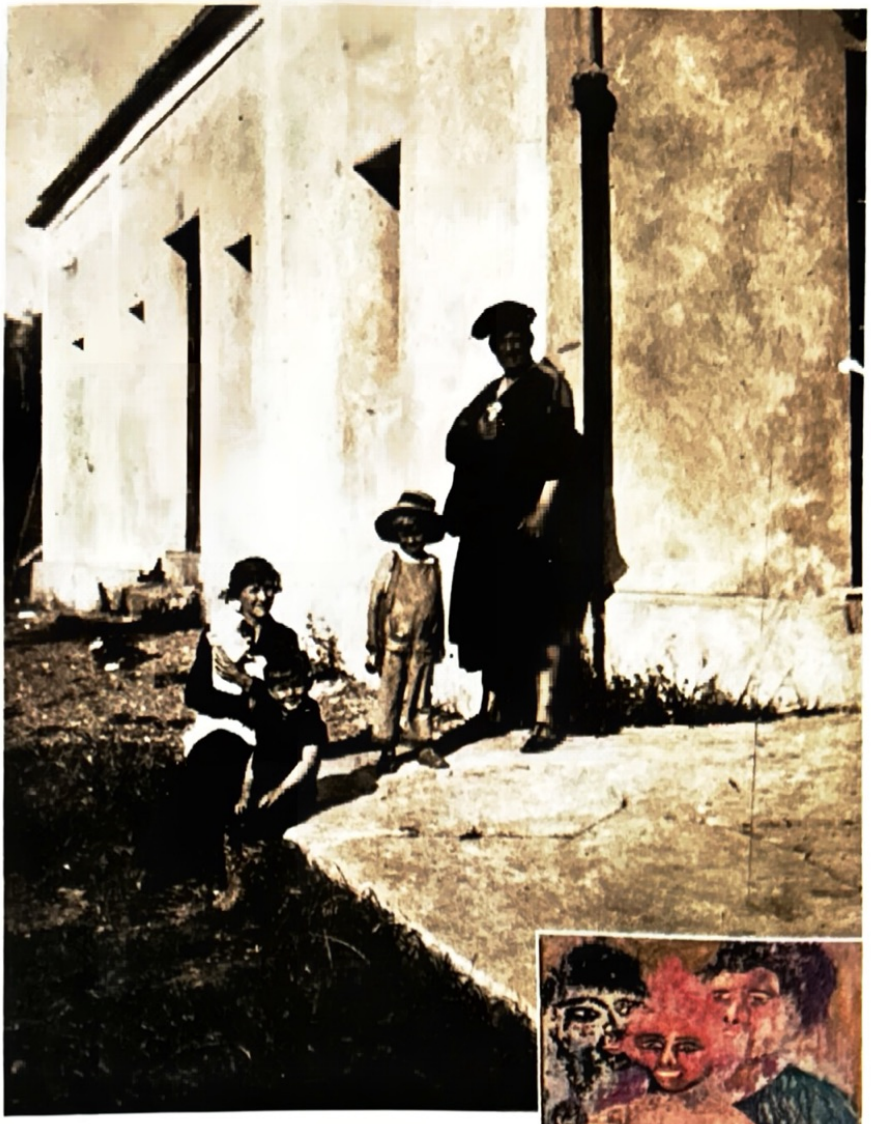
In 1914 Crowley took himself and his new faith to the United States where, so he

Overleaf: Crowley and 'Scarlet Woman' Leah Hirsig with their baby Poupée outside the infamous Abbey of Thelema in Sicily in 1921. An experiment in communal living for students of 'magick', the Abbey was a disaster from the first, ending in 1923 with the death of one of its members

Overleaf, right: Jane Wolfe (left), a stage and screen actress, with Leah Hirsig outside the Abbey in 1921. The Abbey attracted many visitors from all over the world. Some were horrified (especially when Crowley offered them 'cakes of light' which were made of dung) and most went away disappointed

Above: Crowley's sketch of a devouring demon

Right: 'the Devil', from the Tarot pack designed by Crowley and painted by Lady Frieda Harris. The work on the cards was expected to take three months; it took five years



hoped, people would be more receptive to the new gospel and to 'magick', Crowley's occult system derived from his own synthesis of Western occultism, the teachings contained in *The book of the law*, and the tantrism – yogic theory and practice largely concerned with sexuality – that he had learned from Eastern sources.

But the New World proved even more resistant to Crowley than the Old. The six years the self-proclaimed prophet spent in America were unhappy. He was perpetually short of money, made few converts, and was accused of being a traitor to his own country – reasonably enough, for until the United States' entry into the war in 1917 he earned a scanty living by editing a pro-German propaganda sheet.

In 1920 he returned to Europe along with two mistresses – Crowley always maintained a vigorous sexual life – and set up his 'Abbey of Thelema' (a magical word, implying New Aeon, but Crowley often translated it as 'will') in Sicily. For a time this enjoyed a modest success. The Sicilians were surprisingly tolerant of Crowley and his 'magick' and a number of disciples, actual and potential, made their way to the Abbey. These included Jane Wolfe, a minor Hollywood star, Norman Mudd, a one-eyed professor of mathematics, and Raoul Loveday, a brilliant young Oxford graduate who had decided to devote his life to Crowley's new religion.

Above: a pornographic wall painting from the Abbey of Thelema – one of the lesser of its evils, according to the world's press

Loveday died while at the Abbey, probably of enteritis. His wife, who believed that her husband had been poisoned by some blood he had drunk in the course of an occult ceremony, returned to London and began a virulent newspaper campaign against Crowley. Eventually this campaign, which included the denunciation of Crowley as 'a beast in human form', led to the closure of the Abbey. The Sicilian authorities promptly deported him.

The remainder of Crowley's life was, in many ways, an anti-climax. He wandered through Europe, a lonely and increasingly unhappy man, and eventually died in 1947.

At the time of Crowley's death he had only a handful of followers; today he has many thousands – in some way his teachings seem now more in tune with the times than they were during his lifetime.

Mad, bad and dangerous to know

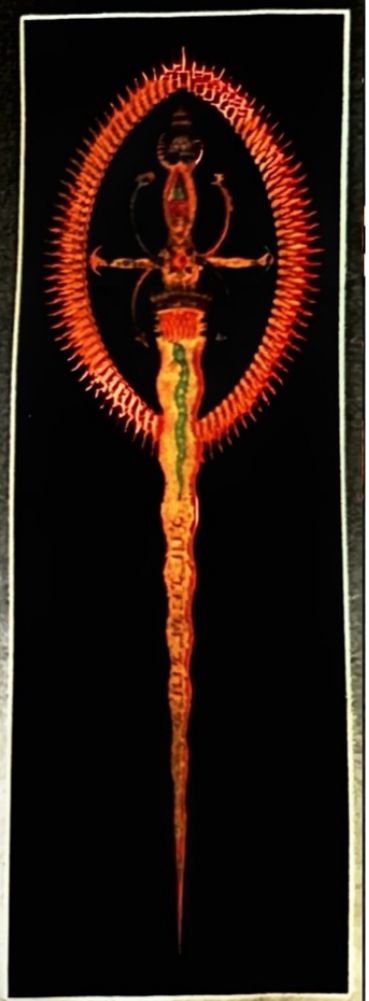
When Aleister Crowley – 'the Beast' – died in 1947, it seemed that, for all their notoriety, his life and his 'magick' would soon be forgotten. But the years since his death have seen an explosion of interest in 'Crowleyanity'

ALEISTER CROWLEY died in 1947 in comparative obscurity. There was, it is true, a slight fuss over his memorial service, which took place in the chapel of the crematorium at Brighton, Sussex, and was denounced by some pompous local councillors as a 'black mass'. In reality the ceremony was totally innocent – consisting of no more than the writer Louis Wilkinson reading aloud some of Crowley's poetry and prose. The matter was soon forgotten.

It seemed likely that, after a few years, only a tiny band of dedicated occultists would remember Crowley, his 'magick' and *The book of the law*, which, Crowley insisted – and seems genuinely to have believed – had been dictated to him by a superhuman being and was destined to be the gospel of the new age.

Below: Crowley in old age. He ended his days in 1947 at a boarding house in Hastings, Sussex, heavily dependent on heroin and alcohol. His landlady, who knew little of his past life, felt he exuded an aura of evil

Below right: the original design for a ceremonial sword for Crowley, by one of his few real friends, General J. F. C. Fuller



Ten years after his death, however, there were signs of a revival of interest in Crowley's life and opinions. John Symonds's study of Crowley's occult practices, *The magic of Aleister Crowley*, drew some attention. Second-hand copies of Crowley's books, once almost unsaleable, began to command high prices. Perhaps most significant of all, some of the 'beat poets' of California discovered the similarities between some of Crowley's teachings and the sexual mysticism with which they had become acquainted through translations of obscure Buddhist and Hindu treatises.

Crowley crazy

By the end of the 1960s a 'Crowley revival' was apparent. The Beatles included his photograph as 'one of the people we like' on the sleeve of their *Sergeant Pepper* album; an 'Abbey of Thelema' – better organised than its Sicilian predecessor, which Crowley had run in the 1920s – flourished in rural Switzerland; and most of Crowley's occult writings (although not his poetry) had been reprinted and was selling in substantial numbers.

In the 1980s this revival was showing no sign of abating. In California an occult brotherhood once led by Crowley flourished under the leadership of Grady McMurtry, many fortune tellers employ the 'Thoth Tarot cards', designed by Crowley and Lady Frieda Harris, and all over the world little groups of occultists study Crowley's writings and practise the magical techniques taught by him.

Clearly enough, there is something in 'magick' that is in tune with the times we live in. The system that Crowley constructed from elements derived from Western occultism, from tantrism (sexual yoga), and from the demonic prose of *The book of the law* may be complete rubbish, may be of great importance, may combine some worthless features with others of great value – but clearly makes a genuine appeal to some people inclined to mystical and magical studies.

The Western occultism that Crowley incorporated into 'magick' was the 'Western Esoteric Tradition', itself a synthetic system, built up from disparate elements and combined into one harmonious, although artificial, whole.

The Western Esoteric Tradition was created in the last decade of the 19th century by S.L. MacGregor Mathers, head of the Hermetic Order of the Golden Dawn, the magical brotherhood into which Crowley had been initiated in 1898.

Mathers had taken such occult arts as astrology, cartomancy (fortune telling by cards), alchemy, ritual magic, the strange Enochian occult system derived from the Elizabethan John Dee, and 'astral projection', and blended them with one another.

Top: Raoul Loveday, whom Crowley designated 'to be my Magickal heir', and whose death in mysterious circumstances at the Abbey of Thelema, Sicily (above), in 1918 eventually led to its closure. Loveday's wife Betty began a campaign of vilification against Crowley, which was taken up eagerly by the British press. It seems that Loveday had died from enteritis brought on by drinking contaminated water – not, as some implied, by Crowley's 'magick'

Left: the controversial film-maker Kenneth Anger in 1955, with one of the Abbey's original doors inscribed with Crowley's creed 'Do what thou wilt'

The Mathers system, described at length in the many books of Dr Israel Regardie, has been, and is, found by many to be a satisfactory guide to occult theory and practice. Those who have practised the whole system claim that it *works*, that it induces profound and valuable psychological and spiritual changes in its devotees.

Nevertheless, it must be admitted that Mathers's system, later incorporated almost in its entirety into Crowley's 'magick', shows signs of straining after an artificial unity. Thus, to give one example, the system attributes the 78 cards of the Tarot pack to various degrees of the zodiac used by astrologers, to various segments of the Hebrew mystical diagram known as the 'tree of life', and even to various 'Enochian letters' copied down by Dr Dee at the dictation of the 'angels' with whom he and his medium,

Edward Kelley, believed themselves to be in communication.

Mathers made these attributions because, following the French occult writer Eliphas Levi, he believed that the Tarot cards were of ancient origin, mystical instructions in pictorial form designed by the Egyptian priests who served Thoth, god of wisdom. Crowley, following Mathers, also accepted this, going as far as to call his treatise on the Tarot *The book of Thoth*. In fact there is no evidence at all that the Tarot cards originated before the later Middle Ages, at which time, and for centuries afterwards, they were used only for playing games. It is interesting to note that occultists were not concerned with the Tarot cards before about 1780 and that, surprisingly enough, there is no evidence of them having been used for fortune telling purposes before that date.

Attractive and effective

In spite of the artificiality of the Mathers system it is internally coherent, intellectually attractive enough in its own way and, more importantly, those who have used it have found it effective. In spite of its almost glib eclecticism it is perhaps the strongest of the three strands that Crowley plaited into the rope of his 'magick'.

However, Crowley himself would not have believed this. As far as he was concerned *The book of the law* with its doctrine of the coming age of 'force and fire', of which he himself was to be the new messiah, was central to his teachings. Although he was never confident that he had fully mastered the book's meaning, it is certain that the book's meaning mastered *him*. He devoted his life to the propagation of its gospel, he studied every word of its text with the same fanatical devotion that his Christian parents had devoted to the Bible, and – whenever he was perplexed and in need of guidance – he would open it at random and take the sentence his finger alighted upon as a direct message from the gods.

His attitude towards *The book of the law* was totally uncritical. As far as he was concerned it was beyond criticism. Thus he was in the habit of opening his conversations with everyone with a direct quotation from it: 'Do what thou wilt shall be the whole of the law.' On one occasion he said this to the painter Augustus John, who testily replied: 'To hell with all laws.' Crowley felt – perhaps for the only time in his life – shocked.

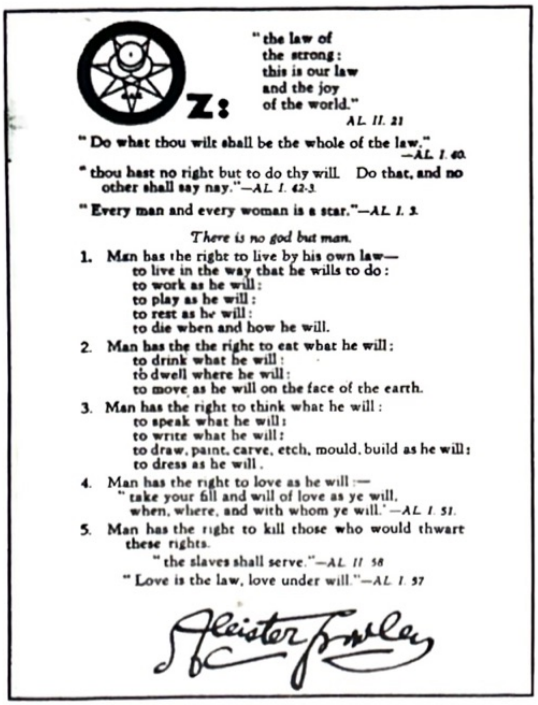
Today Crowley's disciples study *The book of the law* with the same obsessive concern as their master. All religious texts are liable to conflicting interpretation and *The book of the law* is no exception: one contemporary group, for example, is the custodian of a special revelation concerning the relationship between the book and a tenth planet of the solar system, supposedly in an orbit beyond that of Pluto, called Isis.

A magickal experience

When 'Prince and Princess Chioa Khan' – more properly known as Aleister Crowley (left, in 'magickal' robes) and his wife Rose – moved into apartments in Cairo in March 1904, the first thing they did was to convert one of the rooms into an occult temple.

Crowley, an ex-member of the Order of the Golden Dawn, sought to make contact with the gods – and consequently invoked them in their ancient Egyptian forms: Thoth, Isis, Apophis and Osiris. Almost immediately Rose, who, it is said, had little knowledge of occult mysteries, entered into a trance and led Crowley to the (now defunct) Boulak Museum and pointed to a certain exhibit. She had been muttering 'They are waiting for you' and 'He who was waiting was Horus.' Crowley looked closely at the exhibit: it was a statuette of Horus. But more important to him was the exhibit's number – 666. It was the number of the Beast.

For nearly a month Crowley and Rose (now called Ouarda the Seeress) invoked the gods; and the gods, they believed, spoke through them. Crowley's 'Holy Guardian Angel' Aiwass dictated what was to become his Bible, the collection of exclamatory lines known as *The book of the law*. It was to be the holy scripture of the new era of which Crowley was Messiah. But Crowley was in no doubt as to its true nature. Its originator, Aiwass, he referred to as 'our Lord God the Devil'.



"the law of
the strong:
this is our law
and the joy
of the world."
AL. II. 21

"Do what thou wilt shall be the whole of the law."
—*AL. I. 40.*

"thou hast no right but to do thy will. Do that, and no other shall say nay."—*AL. I. 42-3.*

"Every man and every woman is a star."—*AL. I. 3.*

There is no god but man.

1. Man has the right to live by his own law—
   to live in the way that he wills to do:
   to work as he will:
   to play as he will:
   to rest as he will:
   to die when and how he will.
2. Man has the right to eat what he will:
   to drink what he will:
   to dwell where he will:
   to move as he will on the face of the earth.
3. Man has the right to think what he will:
   to speak what he will:
   to write what he will:
   to draw, paint, carve, etch, mould, build as he will:
   to dress as he will.
4. Man has the right to love as he will:—
   "take your fill and will of love as ye will,
   when, where, and with whom ye will."—*AL. I. 51.*
5. Man has the right to kill those who would thwart these rights.
   "the slaves shall serve."—*AL. II. 58*
   "Love is the law, love under will."—*AL. I. 57*

Aleister Crowley

Left: a postcard version of Crowley's 'magickal' opus, *The book of the law*. 'There is no god but man' seemed, to respectable churchgoers, a statement of rather shallow atheism. In fact, Crowley was ahead of his time, believing that Man's subconscious mind is responsible for many, if not all, paranormal events or 'miracles'

On the whole, it seems likely that *The book of the law* is, as far as 'magick' is concerned, a source of weakness rather than strength. For its phraseology is so vague that conflicting readings of its text tend to lead to internal disagreements and schisms in the occult groups that accept its 'divine' inspiration.

Sex as a sacrament

The third element in 'magick', and perhaps the one that has received most public attention, is its tantrism – sexual mysticism and magic. Tantrism is a powerful element in both the Hinduism of Bengal and Tibetan Buddhism. It is concerned with the use of sexuality – expressed sometimes physically, sometimes only symbolically – as a sacrament leading its devotees towards mystical union with the gods.

Crowley may have come into contact with it in the course of his oriental travels, but the main source of the sexual-magic techniques that he taught, practised and incorporated into 'magick' was a German occult society called the Ordo Templi Orientis, or the Order of Templars of the Orient (OTO).

Crowley met and became friendly with the chief of this fraternity, a somewhat dubious individual called Theodor Reuss, who headed several pseudo-masonic lodges, in 1911. In the following year Crowley was appointed head of its British section, taking the imposing but perhaps ludicrous title of 'Baphomet, Supreme and Holy King of Ireland, Iona, and all the Britains within the Sanctuary of the Gnosis'.

The sex-magic of the OTO would seem, certainly to the outside observer, to be on a somewhat lower plane than that of authentic tantrism. Crowley's own diaries – his 'Magickal Record' – make it apparent that he used it more in order to obtain his material desires, money and power over others, than to attain the enlightenment that is alike the goal of the Hindu and Buddhist tantrism.

Above: a portrait of Crowley by a modern disciple. In his poem *Hymn to Pan*, Crowley had written: 'Goat of thy flock . . . I am god/And I rave and I rip and I rend/Everlasting, world without end . . .'

Left: a scene from Snoo Wilson's play *The number of the Beast*, in its London 1982 production, with John Stride as Crowley and Marty Cruickshank as a 'Scarlet Woman'

Crowley wrote several instructional manuscripts, most of them now published, in which he codified Reuss's sexual teachings. They are largely concerned with complex visualisation exercises designed to be used in conjunction with sexual activity.

These, then, are the three strands that make up Crowley's 'magick'; only time will show whether all, or any of them, contain something of permanent value to students of the occult.

But one thing seems certain. Crowley was not, in the ordinary sense of the word, a charlatan. There were elements of the showman, the charlatan, and the confidence trickster in his personality. But he believed in his self-formulated system. He worked for it, suffered for it and devoted his life to it. But, sadly, it may all have been a delusion. It is said that his last words, uttered in a seedy boarding house in Hastings, Sussex, were 'I am perplexed. . . .'

Salem: that way madness lies

The very words 'witch hunt' summon up a picture of mindless, hysterical persecution of the innocent -- which would aptly describe the ugly events of Salem Massachusetts in the 17th century

JUST AFTER CHRISTMAS 1691, seven young girls of Salem Village in Essex County, Massachusetts, USA, took up fortune telling in order to while away the long winter months. They used an egg poured into a wine glass as a 'crystal ball' in an attempt to see their future husbands. Instead, according to the Rev. John Hale of nearby Beverly: 'there came up a coffin, that is, a specter in likeness of a coffin.'

It was an apt omen: 10 months later, as a direct result of the girls' experiments, the little Puritan community lay devastated. Twenty people had been executed for witchcraft, while over 100 more lay in prison, their property confiscated, and the name of Salem – changed to Danvers in the 20th century – had become a synonym for mindless persecution. As a Boston merchant, Thomas Brattle, wrote prophetically: 'I am afraid that ages will not wear off that reproach and those stains which these things will leave behind them upon our land.'

Salem's usually sedate courtroom assumes the riotous madness of Bedlam In just 10 months the God-fearing Puritan community had merely on the accusations of some teenage girls experimenting with the occult executed 20 people on charges of witchcraft and ruined countless local families

Compared with the great witch hunts of Europe, that of Salem was insignificant. In the mid 17th century, for instance, an estimated 900 witches had been burned in the city of Bamburg alone and 5000 in the province of Alsace, while in the English county of Essex – from which the Massachusetts district took its name – the 'Witchfinder General' Matthew Hopkins had dispatched to the gallows at least twice as many victims as were to hang at Salem.

Salem's abiding horror lies in the fact that it was the last major instance of a sober, rational and industrious society riving itself apart literally through fear of the Devil. The details of how it did so exist in abundance; in voluminous court records, over 50 written 'confessions', ecclesiastical journals and contemporary letters. Despite two centuries of historical analysis, the reason why the reign of terror took place still remains largely conjectural.

'When these calamities first began,' wrote

Left: brutal though such treatment may seem today, the pillory, stocks or whipping were the relatively mild punishments for those charged with witchcraft in Salem – before the infamous witch hunt began. Indeed the little community was remarkably tolerant for its time, and boasted such notables as the Rev. Increase Mather (bottom left), who helped to found Harvard University, and his son, the Rev. Cotton Mather (below left) who, despite an undeserved notoriety during the Salem trials, was a tolerant and advanced thinker about 'possession'

the Rev. Samuel Parris, 'which was in my own family, the affliction was several weeks before such hellish operations as witchcraft were suspected.'

Parris was minister of Salem Village and, like the majority of Massachusetts clergymen of the time, a Puritan. However, the New England Puritans had, by the 1690s, become a remarkably tolerant and well-balanced society. Ingersoll's Tavern in Salem Village was patronised by clergy and laity alike, people 'living in sin' were frowned upon but unmolested, and true poverty was almost non-existent. Intellectually, standards were high; Harvard University, on the outskirts of Boston 15 miles (24 kilometres) to the south of Salem Village, was founded largely through the efforts of the Rev. Increase Mather, who was to play a prominent advisory part in the witchcraft trials, while Samuel Sewell, one of the Salem judges, was writing his tract *The selling of Joseph*, the first anti-slavery pamphlet published in America.

Too tolerant to be true?

Prosecutions for witchcraft – despite a widespread belief in the Devil and his works – were rare. Only half a dozen 'witches' had been hanged in the province during the entire 17th century, while a handful more were sentenced to the relatively mild punishments of whipping, fines or exile. In fact almost every village had its 'wise' man or woman, to whom the residents went for healing potions and love charms. The Rev. Cotton Mather, Increase's son, who was to gain an unjustly infamous name during the Salem persecutions, took a tolerant and relatively scientific interest in witchcraft. A former medical student and fellow of the Royal Society, he invited a number of 'possessed' persons into his own home, first searching for signs of organic illness before 'treating' them through prayer and fasting.

It was to prayer and fasting that the Rev. Parris turned when his nine-year-old daughter Elizabeth and 11-year-old niece Abigail Williams began to throw fits after experimenting with the glass and egg. Five other girls were also affected: 12-year-old Ann Putnam and four older girls, Elizabeth Hubbard, Mary Walcott, Mary Warren and Mercy Lewis, whose ages ranged from 16 to 20. The Rev. Parris wisely removed his daughter and niece to the home of a friend in Salem Town 5 miles (8 kilometres) away; the remaining five were to form the 'accusers'.

'Their motions in their fits are preternatural,' wrote the Rev. Deodat Lawson, 'both as to the manner, which is so strange as a well person could not screw their body into; and as to the violence . . . it is . . . much beyond the ordinary force of the same person when

they are in their right mind.'

Later the girls suffered hallucinations, seeing 'spectral' figures who beat, scratched and bit them – often leaving actual marks on their flesh – and struck them temporarily blind, deaf and dumb. They also suffered loss of appetite and had choking attacks. In fact they all exhibited classic symptoms of what is now recognised as hysteria – in the clinical, rather than the colloquial, sense of the word. As one modern author, Chadwick Hansen, puts it: 'with minor exceptions the girls' behavior belongs to the history of pathology rather than the history of fraud.' But practical psychiatry lay 200 years in the future; when the Rev. Parris finally took the girls to the local doctor, William Griggs, he announced: 'The Evil Hand is upon them' – in other words, he believed they were bewitched.

Above: a 'bewitched' girl falls in convulsions before a Salem court. No matter how wild her accusations – even during such fits – wherever she pointed her finger some wretch was arrested, accused of sorcery and imprisoned, fined or even hanged – as this model scene (right) from the Salem Witch Museum shows

The dog it was . . .

That having been established, at least the lay people of Salem knew what to do. Mary Walcott's aunt Mary Sibley visited the Rev. Parris's Carib Indian slaves John and Tituba and asked them to bake a cake of meal mixed with the girls' urine – an ancient counter-spell against spells and curses – which, on 25 February 1692, was fed to the Parris family dog. The 'spell' worked; the dog died, and the girls were able to name their tormentors – Tituba the slave, and two local 'wise women' Sarah Good and Sarah Osburn.

When he heard about the cake the Rev. Parris was appalled; like other contemporary clergymen he believed that 'counter-spells' were as sinful as the original spells. Through the 'witch cake', he said, 'the Devil hath been raised among us, and his rage is vehement and terrible; and when he shall be silenced, the Lord only knows.'

Parris spoke more truthfully than he knew, but the revelation of 'guilty names' had set the wheels of justice in motion, for on 29 February four 'yeomen of Salem Village' swore out warrants for the arrest of Tituba, Sarah Good and Sarah Osburn, and the following day they were brought before the community's two magistrates, John Hathorne and Jonathan Corwin. Hathorne, in particular, seems instantly to have adopted an inquisitorial, rather than magisterial, role, assuming the guilt of the parties before they were even asked to plead. 'Sarah Good,' he asked, 'what evil spirits have you familiarity with? Have you made no contract with the Devil? Why do you thus torment these poor children?' – and so on. In the case of Sarah Good he may have felt justified, for her own husband William testified that he thought she was either 'a witch or would be one very quickly' because of her 'bad carriage to him', and her four-year-old daughter Dorcas claimed that her mother kept black and yellow birds as familiars that 'hurt the children and afflicted persons'.

When the girls were asked to face Sarah Good and say whether she was one of their tormentors, they all immediately fell into fits and 'were dreadfully tortured and tormented for a short space of time'. When recovered, they said that Good's 'spectre' had come and tormented them, 'though her body remained at a considerable distance from them.'

This introduction of what became known as 'spectral evidence' was to be the cause of dissension between the clergy and the judiciary; among its prominent opponents was Cotton Mather, who pointed out that 'the odd effects produced upon the sufferers by the look or touch of the accused are things wherein the Devils may as much impose upon some harmless people as by the representation of their shapes.'

In other words, if the Devil had power to run loose in Salem he also had, in the words of Hamlet, 'power to assume a pleasing shape'. Only clear evidence of a 'pact' between an accused person and the Devil

should be admitted, insisted Mather, otherwise 'innocent, aye virtuous' people were at risk. But the magistrates were, perhaps understandably, impressed by the fact that the girls flew into fits when faced with, or touched by, an 'accused' person.

In vain Robert Pike, a magistrate from nearby Salisbury, pointed out that it would be the height of folly for a person pleading innocent to charges of witchcraft at the same time to perform acts of witchcraft in the courtroom by causing the girls to have fits: 'self-interest,' he said, 'teaches everyone better.'

In the cases of the first three women, however, there was little need to convict them on 'spectral evidence'. Sarah Good, a vicious old woman according to her husband's testimony, was known to mutter under her breath when passing people who had annoyed her – surely she must be reciting curses? Sarah Osburn admitted that she had dreamed of 'a thing like an Indian, all black, which did prick her in the neck' – surely this was the Devil 'marking her' for his own?

Salem – or Danvers as it is known today – in Massachusetts is a thriving tourist attraction. Visitors enjoy taking photographs of the 'witch house' (above), whose sinister air remains remarkably potent, and of Gallows Hill (left) – which in another location might be an ideal picnic spot. In the summer Danvers is crowded with sightseers, but two centuries ago it was a place to be avoided

But the evidence of the slave Tituba was most sensational of all, and opened a new dimension of unease – it seemed that an organised coven was operating in the neighbourhood. She had, she said, met the Devil in the shape of a tall black man with white hair. Sometimes he had come in the shape of an animal. He had brought a book and made her place her mark in it 'red like blood', thus binding her to him for six years. There had been nine marks altogether in the book, two of them made by Good and Osburn, two made by 'witches from Boston'. Both Good and Osburn, she said, had familiars: cats, birds, and a 'thing with wings and two legs and a head like a woman'. Most disturbing of all, Osburn had 'a thing all over hairy, all the face hairy, and a long nose, and I don't know how to tell how the face looks.' It had two legs 'and goeth upright like a man, and last night it stood in Mr Parris's hall.'

The three women were committed to jail. Osburn died there on 10 May, and the slave Tituba was left there until she was sold to pay her jailer's fees – the Rev. Parris being too shocked, no doubt, by the revelations of what had gone on in his house, to pay them. Sarah Good lay awaiting sentence.

Meanwhile, Friday, 11 March was appointed as a day of fasting and prayer during which the ministers of Essex County would meet for a consultation. But instead of agreement another seed of dissension was sown when the girls did just what Cotton Mather feared: they accused a respectable church member, Martha Corey, of witchcraft.

Goodwife Corey had been sceptical from the first of the 'witchcraft' charges, even refusing to allow her husband to visit the magistrate's examinations. When she expressed her scepticism in court – 'we must not believe all that these distracted children say' – she annoyed Judge Hathorne. But

Below Martha Corey, a highly respectable member of the community, being asked to sign a confession that she is a witch. This was what the Rev. Cotton Mather had feared – that the witch hunt was a contagion from which no one, no matter what their previous reputation, was safe. But the most spectacular terror was engendered by the 'evidence' of the slave Tituba (bottom), who told of a local coven, familiars and all. There was, however, no real evidence to support this allegation – but in the prevailing atmosphere none was needed

much more damning, when she bit her lip in concentration, the children complained of being 'bitten' in the same place, the marks showing clearly.

Again the clergy, in the person of the Rev. Deodat Lawson, cautioned the magistrates against precipitate action. In church, Lawson preached that 'rash censuring of others, without sufficient grounds . . . is indeed to be like the Devil, who . . . is a false accuser.'

But the damage had been done. On the very day of Lawson's sermon one of the most benevolent members of the community, a regular church-goer named Rebecca Nurse, was accused. Even Judge Hathorne was uncertain at this turn of events, as his questioning shows; he expressed his doubts and prayed that God might 'clear you if you be innocent'. Nevertheless, precedents had been established, and the community was beginning to think the testimony of the children infallible.

One sane – if rather brutal – voice spoke out. A farmer named John Proctor, who employed one of the afflicted girls, Mary Warren, as a servant, rode into the village to 'fetch home his jade' as he put it. Dragging her off, he said: 'If they were let alone we should all be devils and witches quickly. They should be had to the whipping post.' It was his intention, he said, to 'keep her close to the wheel and thrash her'. Curiously, just as a slap in the face stops hysterical laughter, Proctor's whipping may have done Mary Warren some good, for she was the only one of the girls who completely recovered her sanity.

Next Dorcas Good, Sarah Good's four-year-old daughter, volunteered that she herself had a little snake as a 'familiar', which sucked at a spot on her hand. The examiners noticed such a spot 'about the bigness of a flea bite'. Incredibly, they accepted the 'confession' of the toddler without question. The Rev. Parris further confused matters by preaching a sermon to the effect that, as Judas had betrayed Christ, so a devout church member – Rebecca Nurse – might well be the servant of Satan in disguise. When Rebecca's sister, Sarah Cloyse, heard this she got up and left the church, slamming the door behind her. It was enough: next day the girls had pointed the finger at her – and she, too, was accused on 4 April, along with Elizabeth Proctor, wife of the farmer who had saved Mary Warren.

Law, order – and lunacy

At this point four other magistrates were appointed to sit with Corwin and Hathorne, including Thomas Danforth, deputy governor of the colony, but it was Hathorne, the bit firmly between his teeth, who continued to be the driving force. John Proctor joined his wife in the dock, closely followed by his servant Mary Warren – 'cured' by the whipping she had received, she in turn was accused by her former fellow sufferers.

On 19 April Giles Corey, husband of Martha Corey, was dragged before the court along with two new suspects, a young girl named Abigail Hobbes and a woman named Bridget Bishop who had a long-standing reputation as a witch. Abigail Hobbes was a prankster who loved shocking her elders. Once she had mocked the sacrament of baptism by pouring water over her mother's head, and on another occasion told a friend that she had 'sold herself body and soul to the Old Boy' – presumably the Devil.

Bridget Bishop had been accused of witchcraft 10 years previously, but had been released when the Rev. Hale defended her. Nevertheless, it is likely that she was one of the three or four 'real' witches turned up by the Salem enquiry: witch dolls stuck with pins were found in her house; certainly many people willingly testified to her malice and her open avowal of supernatural powers.

Another 'real' witch was Candy, a Negro slave from Barbados, who gave a demonstration of her 'powers' in court by tying knots in rags. As these were first burned and then placed under water, so the afflicted girls suffered spectacularly; one was 'presently burned on the hand' while two were 'choked and strived for breath as if underwater'.

Cotton Mather was later to point out that by allowing these experiments to take place the magistrates themselves were actively condoning witchcraft, but by this time any means of combating the 'evil' seemed permissible, so deep did it run. For it was one thing to accuse the likes of Bridget Bishop, Candy, Dorcas Hoar, the Beverly 'wise woman', and 'Mammy' Redd, 'town witch' of Marblehead, but quite another to find a former minister of Salem Village in the dock.

Salem's grim legacy

By the time the witch hunt of Salem had run its course, whole families had been ruined and the very name of the village had become synonymous with mindless persecution. But were all of the accused totally innocent? We may never know

ON 20 APRIL 1692, 12-year-old Ann Putnam saw the apparition of a Puritan minister who half strangled her. Ann, one of the 'bewitched' girls of Salem Village, Massachusetts, USA, asked her ghostly tormentor who he was. Obligingly, he told her: he was the Rev. George Burroughs, who had been minister at the village between 1680 and 1682 – when Ann was two years old.

'She was greviously affrighted,' according to evidence presented to the witchcraft court, 'and cried out, "Oh dreadful, dreadful. Here is a minister come. What, are ministers witches too?"'

In this case, the court decided, George Burroughs was, indeed, a witch. He was recalled from the village in Maine where he held his present living, and brought back to Salem to answer the charges against him. To Judge John Hathorne, Burroughs's position in the community made him an obvious leader of the oddly assorted collection of 'witches' already arrested. Burroughs, a short, stocky man, had been suspected by popular gossip of doing away with both his wives while minister at Salem. Now Ann Putnam confirmed the rumours; she had seen the wraiths of the two women, she said, and they told her that they had been victims of their husband's witchcraft.

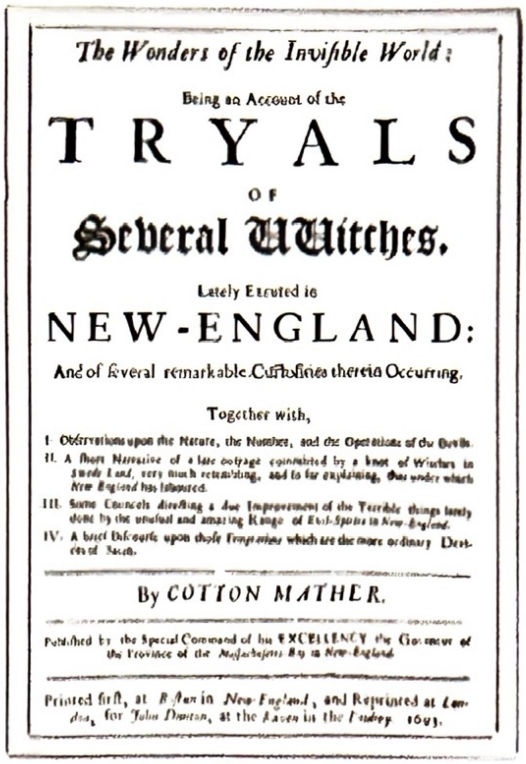
Devilish eavesdropping?

Goodman Ruck, Burroughs's former brother-in-law, told the court that on one occasion, when he and his sister and Burroughs had been out picking strawberries, the minister had left them for a while and had rejoined them further along the road, when he was able to repeat the conversation they had had in his absence. When they expressed surprise, Burroughs had told them: 'My God makes known your thoughts unto me' – by which, Ruck explained, he meant the Devil.

Unfortunately for Burroughs, he was apparently in the habit of hiding, listening to conversations, and then reporting them verbatim to his astonished listeners – not a trick liable to endear him to the hysterical inhabitants of Salem.

Despite his small stature his broad shoulders gave Burroughs enormous strength, which he had used to impress the community. There is evidence to suggest that he used tricks to enhance his strong-arm reputation, appearing to lift a 7-foot (2-metre) musket simply by inserting his forefinger in the barrel, for instance, and picking up a

Two modern reminders of Salem's notorious history: the brooding figure of a black-clad Puritan (above left) and the post office's 'witch city' sign (left), representing between them the present inhabitants' awareness of their past – and its commercial potential today



The Wonders of the Invisible World:

Being an Account of the

TRYALS

OF

Several Witches,

Lately Executed in

NEW-ENGLAND:

And of Several remarkable Curiosities therein Occurring.

Together with,

I. Observations upon the Nature, the Number, and the Operations of the Devils.

II. A short Narrative of a late outrage committed by a knot of Witches in Swede Land, very much resembling, and to be explained, that under which New England has laboured.

III. Some Councels directing a due Improvement of the Terrible things lately done by the unusual and amazing Range of Evil Spirits in New-England.

IV. A brief Discourse upon those Temptations which are the more ordinary Devices of Satan.

By COTTON MATHER.

Published by the Special Command of his EXCELLENCY the Governour of the Province of the Massachusets Bay in New-England.

Printed first, at Boston in New-England, and Reprinted at London, for John Dunton, at the Raven in the Poultry. 1693.

The Rev. Cotton Mather's best-selling account of the Salem 'witch' trials, promising the reader a description of the works of an 'unusual and amazing range of evil spirits in New England'

barrel of molasses between finger and thumb. The magistrates, however, took these tales as evidence of real supernatural power, and when it was 'revealed' that Burroughs had made his wives sign oaths of secrecy about his exploits, he was finished.

For although some of those who had confessed so far – Tituba, for instance, and Dorcas Good – were spared, for others the enquiry had become a hanging matter. On 27 May Governor William Phips who, assisted by the Rev. Increase Mather, had been negotiating a new charter for Massachusetts, turned away from more pressing business to establish a special Court of Oyer and Terminer. These courts, abolished in 1972, were set up especially by Royal Commission to enquire into serious criminal matters. Phips appointed the cream of New England judges – who, acting on the written advice of Cotton Mather – tended towards leniency at first. Mather stressed that 'it is better that ten witches go free than that one innocent person be convicted'; but on 10 June the court claimed its first victim, Bridget Bishop.

On 19 July the malicious Sarah Good, the innocent Rebecca Nurse, and three other women followed her to the gallows. As she climbed the gallows steps, Sarah Good made a prediction that some were to think, in retrospect, proved her guilt. When the Rev. Nicholas Noyes asked her to repent of her witchcraft, she cried out: 'You are a liar. I am no more a witch than you are a wizard, and if you take away my life, God will give you blood to drink.' A quarter of a century later Noyes suffered a massive lung haemorrhage and choked on his own blood. Judge Hathorne's great-great-grandson, Nathaniel Hawthorne, used the incident in his novel *The house of the seven gables*.

On 19 August five more people, including the Rev. George Burroughs and the whip-wielding farmer John Proctor, were hanged on Gallows Hill. Burroughs made a good impression on the crowd by reciting the Lord's Prayer perfectly – something no witch was supposed to be able to do. But Cotton Mather addressed the spectators from horseback, maintaining that the Devil could appear as 'an angel of light'. This move, more than his repeated appeals for leniency and common sense, blackened Mather's name for posterity. But he had recommended that Proctor's wife Elizabeth be spared. She had been condemned to death with him, but was allowed to 'plead her belly' – she was pregnant – and was later released.

In September came one of the bravest stands against the increasing madness of the court. Giles Corey, husband of Martha Corey, refused to recognise the impartiality of his judges, and was thus subjected to *peine forte et dure* – pressing with heavy weights – to make him answer the charges. He died after two days of this torture on 19 September, still silent. 'His tongue being pressed

The flight of witches to an unholy sabbat. At Salem, Tituba the slave declared that there was indeed a local coven – but was this mere fantasy, or were there really witches at Salem?

Top the House of Seven Gables in Salem today, the setting for Nathaniel Hawthorne's novel of the same name. Hawthorne was a direct descendant of Judge Hathorne, a central character in the witch hunt

Top right. Lori Cabot, lecturer in witchcraft at the modern Salem State College

Above the Rev. George Burroughs, hanged as a witch at Salem. His unorthodox habits and interest in diabolism made his execution certain

out of his mouth,' recorded one contemporary, 'the sherriff with his cane forced it in again when he was dying.'

A rather less dramatic stand had been taken by Captain John Alden of Boston, who had been accused by the demented girls while on a visit to Salem. He stood in court, 'a bold fellow with his hat on before the judges', and it was said that he 'sells powder and shot to the Indians and the French, and lies with the Indian squaws and has Indian papooses'. When one of the magistrates, Bartholomew Gedney, remarked how the witnesses fell down when Alden looked on them, Alden asked 'what reason there could be given why Alden's looking upon *him* did not strike *him* down as well, but no reason was given. . . .'

Alden later escaped from jail and made his way to New York, returning when the witch hunt was over. But eight more people, including Martha Corey and the 'wise woman' Mammy Redd, were executed on 22 September. By now an air of black farce was creeping in; one man, for instance, was accused of 'firing a mare's fart' by sticking a lighted tobacco pipe up its anus in order to relieve the belly ache. When the girls were taken to Andover – a small town quieter, if anything, than even Salem Village had been previously – they claimed that 'there were forty men in it that could raise the Devil as well as any astrologer. . . .'

In fact over 50 people were 'complained of' in Andover, and when the local magistrate Dudley Bradstreet had signed 'thirty or forty warrants' he came to his senses and refused to grant more; predictably he and his wife were immediately accused, and fled to New Hampshire. Bradstreet's brother John was also forced to flee; his dog was therefore executed instead.

Cotton Mather's prediction that 'worthy people' would be caught up in the general panic was gradually coming true. One Boston merchant threatened to sue his accusers to the tune of £1000, upon which the charges were promptly dropped; other people 'accused' but not proceeded against included Judge Nathaniel Saltonstall, who had resigned from the court in protest at its inhumanity, Phillip English, a relative of Judge Hathorne, and the mother-in-law of Judge Corwin – a lady named Mrs Margaret Thatcher.

The end of the madness

Increase and Cotton Mather renewed their protest at the admission of 'spectral evidence', and by late summer 'excepting Mr Hales, Mr Noyse, and Mr Parris, the Reverend Elders throughout the country [were] very much dissatisfied.' On 29 October the clergy, led by Increase Mather, presented a bill before the General Court of Massachusetts in Boston calling for the dismissal of the Court of Oyer and Terminer. The bill also called for a 'fast day' that they 'might be led in the right way towards the witchcrafts'. The witch hunt was over.

Then began the recriminations and the allocation of blame. After a long argument in Council, the Rev. Parris was dismissed from the Salem Village living in 1697, on the grounds that he had been 'the beginner and procurer' of the trouble by publicising the girls' 'possession' in the first place.

The excommunications of several church members, including Martha Corey and Rebecca Nurse, were posthumously lifted, while survivors such as Elizabeth Proctor,

who because of their sentences had been unable to possess the property of their executed relatives, were compensated by the court. But the heartbreak suffered by many in the community was not to be lifted so easily. One petition, sent to the General Court set up in 1710 to investigate, speaks for many:

> My wife . . . was in prison about four months and then executed. A sucking child died in prison before the mother's execution. A child of four or five . . . was in prison seven or eight months, and being chained in the dungeon was so hardly used and terrified that she hath ever since been very chargeable, having little or no reason to govern herself. And I leave it unto the honorable Court to judge what damage I have sustained by such a destruction of my poor family. . . .

A crying shame

Seven women, including Bridget Bishop and Mammy Redd, never did receive a reversal of their attainders – a pardon. The nearest their descendants got was in a resolution by the General Court of Massachusetts in 1957 to the effect that

> Whereas . . . certain descendants . . . are still distressed by the record of said proceedings [the witchcraft trials] . . . the General Court of Massachusetts declares its belief that such proceedings . . . were and are shocking . . . and as all the laws under which said proceedings, even if then legally conducted, have been long since abandoned and superceded by our more civilized laws, no disgrace or cause for distress attached to the said descendants. . . .

There were undoubtedly strange things going on at Salem. The 'seance' that first set the girls off into pathological hysteria has exact parallels in well-attested modern cases.

Above: Senator Joe McCarthy, whose anti-Communist mania assumed an hysteria reminiscent of that of the Salem witch hunt. Among his many victims was Charlie Chaplin (right), whose career suffered a severe setback because of McCarthy's campaign – although he was innocent. Another victim was writer Arthur Miller, whose play *The crucible* (below), which was based on the Salem trials, contained thinly veiled references to McCarthy

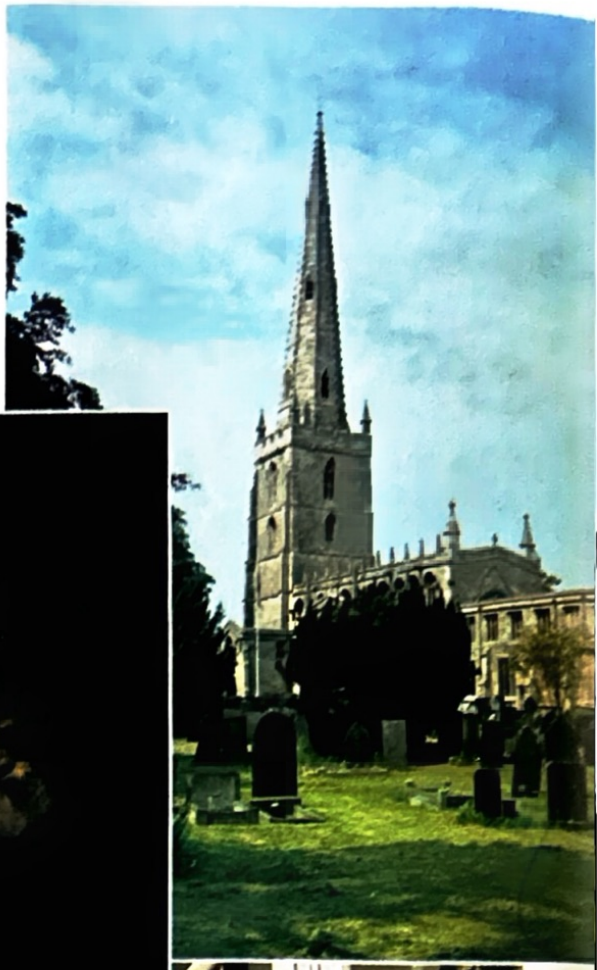
The evidence of Tituba, the Carib Indian slave, when taken as a whole seems to indicate that she had at least some of the characteristics of an excellent medium.

The Rev. George Burroughs, trickery apart, did have a deep knowledge of diabolism, and behaved very oddly for a Puritan minister: he admitted that he had not taken communion for years, and only the eldest of his children had been baptised. And there can be little doubt about the efficacy of at least some of the spells cast by the many 'village wise women' who had been called before the Salem courts. Anthropologists have shown repeatedly that witchcraft works in societies that believe in it.

But the blind and mindless horror brought down by otherwise benevolent men on their own people, swiftly followed by apparently sincere shame and repentance for what they had done, is of a deeper order entirely. When the anti-Communist 'witch hunts' of the McCarthyite 1950s were seen in retrospect to compare so closely with the events in Salem Village, it seemed that Man's own devilish power to wreak havoc among the virtuous had not diminished with the passing of time.

The flower and the skull

Did the three women of the Flower family kill the Earl of Rutland's sons through witchcraft in the early 17th century? Or were they themselves victims – of an hysterical witch-hunt?



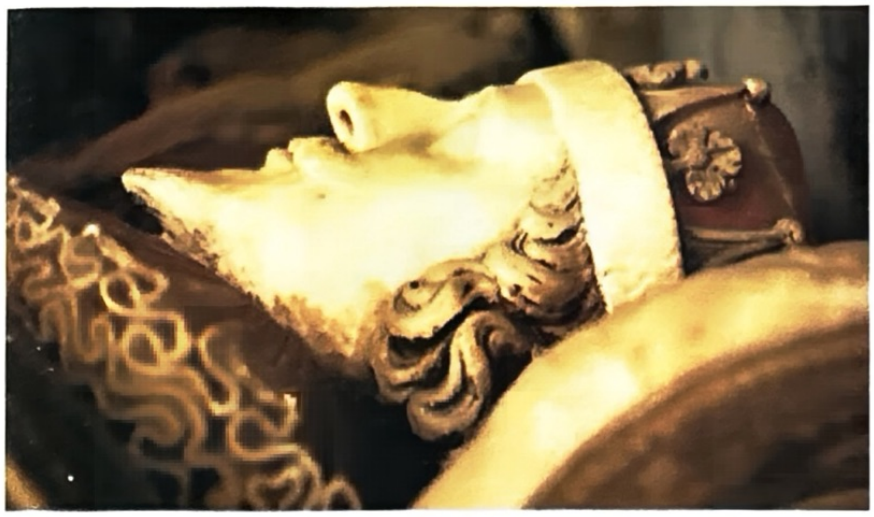
IN THE church of St Mary the Virgin, at Bottesford in Leicestershire, there is a tomb that is unique in English art. It is called the 'witchcraft tomb', and is the only English memorial whose inscription claims that the deceased died through witchcraft. The tomb is that of the sixth Earl of Rutland, who died in 1632. The marble monument consists of three life-sized recumbent images, raised on tiers. The topmost effigy is that of Lady Frances, who became the wife of the sixth Earl in 1604, and who bore him a daughter. The centre effigy is that of the Earl himself, wearing the court dress appropriate to his rank and the Order of the Garter. At his feet is the family crest of a peacock with spread tail. The effigy on the lowest of these three shelves is that of his second wife Cecilia Hungerford, whom he married shortly after the death of his first wife, in 1608. At the head of the group, kneeling in prayer, is the effigy of his daughter Katherine, who eventually became the Duchess of Buckingham. At their feet are two effigies of the sons born to him of the Countess Cecilia.

Above the group there is a long – and somewhat pompous – inscription, almost certainly written by the Earl himself, who designed the tomb. This mainly records his travels and honours accorded him on the Continent. But it is this inscription that makes the tomb unique, for it records: IN 1608 HE MARRIED THE LADY CECILIA HUNGERF'RD, DAUGHTER TO THE HON'BLE KNIGHT SIR JOHN TUFTON, BY WHOM HE HAD TWO SONNES, BOTH WHICH DYED IN THEIR INFANCY BY WICKED PRACTICE AND SORCERYE.

The effigies of the two sons hold skulls: the elder, Henry, holds a skull in his left hand while the younger, Francis, holds a skull in his right hand. But the symbolical flower that Francis holds in his left hand is a direct reference to the supposed manner of his death, for the surname of the witches who were supposed to have caused it was *Flower*.

The Flower family – a mother and two daughters – worked in the home of the sixth Earl, Belvoir Castle. Joan Flower was a kind of general charwoman but her daughters Philippa and Margaret lived in the castle, the latter looking after the poultry and attending to the laundry. Both servants gained bad

Below: the effigy in Bottesford Church of the sixth Earl of Rutland, who died in 1632 of natural causes. But his sons, Henry (far left) and Francis (below right), were believed to have been cursed to death by the women of the Flower family. Both effigies of the sons hold skulls, but that of Francis also holds a flower – commonly thought to be a direct reference to the name of the alleged witches



Above left: the picturesque church at Bottesford in Leicestershire, which houses the only known 'witchcraft tomb' in England (left). The family tomb of the sixth Earl of Rutland is unique in that its inscription openly ascribes the deaths of his two sons to 'wicked practice and sorcerye'

reputations, and Margaret was dismissed – although, it seems, in a kindly manner.

Shortly afterwards the elder son of the Earl, Henry, Lord Roos, fell sick and, after a lingering illness, died, to be buried in Bottesford Church in September 1613. Local suspicion insisted that he had died from witchcraft; the three Flower women, who had (as most people imagined) some reason for damaging the Earl and his wife – and who had already a reputation for being witches – were arrested in 1617, long after the death of the child, and were brought before local magistrates, who included Samuel Flemming, rector of Bottesford. These gentlemen passed the women on to further examination before justices at Lincoln jail.

Joan Flower never reached Lincoln, for she died in mysterious circumstances on her way to trial. Accounts vary, but some insist that she asked for bread, ate it and choked. This account corresponds in essence to popular traditions: it was widely believed that witches could not eat bread. The superstition was linked with the idea of the sacramental quality of bread: a witch – possessed by demons or by the Devil himself – could not take Christ, in sacramental form, into his or her being.

Another account tells the story as though Joan herself were attempting to prove her innocence, and called down upon her the wrath of God:

> But Joan Flower . . . before her conviction (as they say), called for bread and butter, and wished it might never go through her, if she were guilty of that whereupon she was examined; so, mumbling it in her mouth, never spake more words after; but fell down and died . . . with a horrible excruciation of soul and body . . . .

Margaret confessed on 22 January 1618, during an examination before Sir Henry Hobbert, the Chief Justice of the Common Pleas, and local dignitary Sir Edward Bromley. She and her sister claimed that they had cast the death spell and had bewitched the elder child, his brother and his sister. Further, they had cast spells that the Countess might bear no more children. All this they had done because they were angry at being dismissed from service at the castle. The story they told was full of the traditional imagery of witchcraft. Margaret described how they had cast the death spell by using a glove stolen from young Henry. Her mother had stroked her 'familiar' – a cat – with the glove, dipped it in hot water, and pierced it with scissors. This, they insisted, had brought the child to his death. Two years later another glove had been misused in this way, and Francis was similarly bewitched. They had confessed, and both Margaret and Philippa Flower were found guilty. They were hanged at Lincoln on 12 March 1618.

A survivor of the curse?

If the records are to be believed, the second child did not die until all three witches were themselves dead. He survived until 7 March 1619, and was buried in St Nicholas Chapel, Westminster, at the time when the sixth Earl was attending the King. But popular accounts insist that the two children died at more or less the same time – one of the guidebooks to Bottesford Church even repeats this version of the story – perhaps because of the ambiguity of the inscription on the witchcraft tomb.

We may be sure that when the sixth Earl was writing his own epitaph, he himself

believed that his children had been 'hexed' – or cursed – to death. He, the villagers who had the three women arrested, the examining magistrates, and presumably also the judges at Lincoln, sincerely believed that the women were witches. Such was the superstition of the time.

One may today wonder not so much whether they were witches, as whether they actually believed themselves to be witches. The strength of the legal argument, such as it was, rested upon their own admission of guilt. The women 'confessed', as the inscription on the tomb records. This might lead one to suppose that they confessed freely, for it is generally believed that under English law torture was not permitted.

Torture was, indeed, forbidden by English common law. But there are all too many cases recorded where this law was deliberately ignored. Direct torture was often applied – it may have been unofficial, but it was certainly effective.

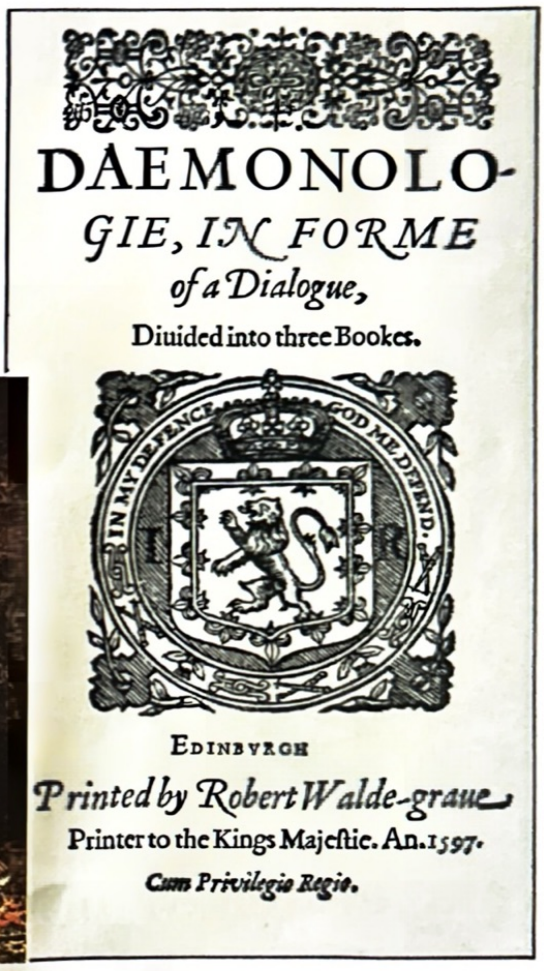
While the majority of those accused of witchcraft denied their confessions – apparently made under duress – and pleaded not guilty, they had neither counsel to defend them nor any legal advice. And since there was no legal requirement for evidence, almost anything could be admitted in court. For example, since it was widely believed that witches had familiar spirits that masqueraded as pets, any old woman who kept a cat or a dog, and who was disliked in the neighbourhood, was in danger of being arrested as a witch. Margaret Flower, when examined in January 1618, confessed to the heinous crime of owning a cat called Rutterkin, 'who would whine, and cry "mew".'

The Bottesford witches became more than merely a forgotten footnote in history. One authority tells us that King James I, who was a friend of the sixth Earl, 'was loth to believe that there were witches; but that which happened to my Lord Francis of Rutland's children convinced him.' This is sheer nonsense, for when the Scottish James VI began his reign in England as James I in 1603, he was already a firm believer in witchcraft, and indeed brought out a new edition of his influential *Demonology* in London during his year of accession.

The Flower case seems to be exceptionally curious, for the two daughters were hanged for murder, yet it was their mother who was supposed to have actually enacted the spell. Again, one of the children whom they are reputed to have killed by witchcraft died only after they had paid the supreme penalty. As the historian of Belvoir Castle points out, 'The principle charge against them . . . was, their having a cat called Rutterkin; the supposed diabolical agent of their machinations.' In the light of modern understanding, it is apparent that the three women were not witches. They died like many other innocents of the time as sacrifice to superstition. And the perpetuation of their name was due partly to the publication of a pamphlet in the year of their death (a fairly standard practice for notorious executions), a document that is a sop to the anti-witchcraft fervour of King James's reign.

But despite the direct reference to 'sorcerye' on the tomb, there is an ironical footnote: the flower clutched in the hand of the younger son has a double symbolism. Although an obvious pointer to the alleged witches of the Flower family, it is also a symbol of innocence.

The Earl of Rutland (above, in effigy, with his two wives) was a companion of King James I (below), whose book *Demonology*, published in 1597 (below right), did much to stir up the witch-hunting hysteria for which his reign is notorious. It may well be that the Earl truly believed his sons to have been cursed to death by the Flower family – or the inscription on the tomb may simply have been an oblique way of currying favour with the King



DAEMONOLO-
GIE, IN FORME
of a Dialogue,
Diuided into three Bookes.

IN MY DEFENCE GOD ME DEFEND.

EDINBVRGH
Printed by Robert Walde-graue,
Printer to the Kings Majestie. An. 1597.
Cum Privilegio Regio.

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Francis King is the author of many books on magic and the occult, including Rites of Modern Occult Magic, Ritual Magic in England and Satan and Swastika. He was a contributor to two major encyclopedias, **The Unexplained** and **Man, Myth and Magic.**

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CULT & OCCULT

Man has always looked for some kind of system to bring order to his life and give him power over it; to allow him to predict his future, control his destiny and increase his fortune. We are seeking such a system every time we glance at a horoscope chart or bet on a 'lucky' number. This volume offers a comprehensive survey of familiar occult sciences like astrology and numerology and goes on to examine in a thorough and balanced way a collection of lesser-known ones such as divination, alchemy and witchcraft. It includes sections on:

* The symbols of the zodiac – their origins and meaning
* Sex and the occult
* Consulting the I Ching to foresee the future
* The witch trials of Salem
* Sacred geometry
* The search for the Elixir of Life
* Powerful voodoo rituals
* Finding hidden objects or underground water by dowsing